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YIELD AND COMPOSITION OF UTAH'S RANGE SITES



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YIELD AND COMPOSITION OF UTAH'S RANGE SITES

by

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Soil Conservation Service

Salt Lake City, Utah

January 1971

Introduction

This publication will be primarily one of range yield and plant composition of Utah's range sites. It will also give yield by soil taxonomic units where these are available and correlated. The data for this document has been taken through the years 1953 to 1969. Technicians of the Soil Conservation Service have collected this yield data primarily to develop range site descriptions as tools in inventory of rangelands in developing ranch plans with ranchers cooperating with soil conservation districts. Data on good or excellent condition range has been used for range interpretations in soil survey reports. Data in various range condition classes for a given range site can be used to show ranchers results of improving range condition by establishing different range practices. It is also used as basis for developing cost return information for various range improvement programs. This information has been used to develop range condition guides for the different range sites. These guides are used to determine range condition in the ranch planning process. This yield data is presented in total annual pounds per acre air dry. The composition is in percent of each species by air dry weight. Those interested can use this data putting interpretations on it to suit their own needs.

Methods and Procedures

During 1953 through 1959 yield data was taken on 9.6 square foot plots by clipping all species on each plot. Green weights were recorded in grams. Samples were air dried for 2 or 3 weeks and green weights were then converted to dry weights by multiplying green weight by percent dry computed from the dry weights of each species. Dry weight in grams was then multiplied by 10 to give pounds per acre air dry.

In 1960 and thereafter yields were taken by the double sampling method. Weights of species were estimated on 10-plot transects on a given soil taxonomic unit. One or more of these plots were then harvested. Correction factors were computed by dividing the actual weight clipped by the estimated weight of each species. Actual green weight was computed by multiplying estimated weights by the correction factors for each species. These green weights were converted to dry weights by multiplying percent dry from dried samples by the corrected green weights. The total dry weights of the ten plots in grams converts directly to pounds per acre.

Yields include all species regardless of height or accessibility to live-stock. Yields are based on the total growth for each year. Yields of grasses and forbs includes all above-ground production of leaves, stems,

flowers, and fruit. Yield of shrubs and trees includes current growth of leaves, current twigs, flowers and fruit produced in the year the yield was taken. In estimating and harvesting only those plants whose stems originated in each plot were included. Vegetation that had not been grazed since the beginning of the current growing season was estimated and harvested. Determinations were made near or shortly after the end of the growing season of the major species.

Air dry weights of trees and large shrubs taken from larger plots were added to determine the total yield. These plots were either 1/100 of an acre (4.356 feet x 100 feet) or 1/10 acre (4.356 feet wide x 1000 feet long). Weights were estimated by use of a sample weight unit. After the number of weight units were recorded the weight of the sample unit was taken after it was air dry. The weight was determined by multiplying the number of weight units by the air dry weight of the sample.

Percentage composition was determined on the summation of 10-plots by dividing the air dry weight of each species by the air dry total weight of all species.

Yield data has been summarized on the various soil taxonomic units. Soil taxonomic units were grouped into range sites on the basis of total annual yield, significantly different plant species and/or significant differences in composition of plants.

Range Sites

A range site is a distinctive kind of rangeland that differs from other kinds of rangeland in its potential to produce native plants.

Generally a difference of 25 percent in total yield is used to designate two different range sites. If the plant composition varies enough that different key species for management are selected then two different sites exist.

In getting yield data as a basis for developing range site descriptions a number of methods were used. One of the most important sources wherever they could be found was on relict areas that have been subjected to minimal abnormal disturbance especially excessive grazing. Other good sources of yield data were rangeland which has received proper or light grazing use and exclosures or other areas where no use has occurred for a period of years. After yield data was obtained from the above, some modification or verification of it was made. Study of early historical accounts and botanical literature prove that this was necessary. Ecological, range and soils research dealing with natural plant communities was also used for verification or needed modifications. These site descriptions will be continually modified as more and better yield data are collected and as additional knowledge is acquired concerning plant, soil and climatic correlation.

Yield data taken in good, fair and poor condition is needed to advise the rancher what is being produced in these conditions in comparison to the potential of the site. Good produces 51 to 75% of the plants that were there in the potential, fair produces 26 to 50% and poor from 0 to 25%.

Names of Utah's Range Sites

The first word in the site name indicates the climate except for run-in or water table sites which receive extra moisture for plant growth either as overland run-in or from a beneficial water table within reach of plant roots. These sites are: (1) Alkali bottom - with a water table below 20 inches but within reach of roots but with considerable salt and alkali causing salt tolerant plants such as alkali sacaton and greasewood to be present. (2) Salt meadow - water table above 20 inches with considerable salt and alkali. Dominant plant is saltgrass. (3) Semi-wet meadows - water table below 20 inches but within reach of roots. (4) Semi-wet streambottoms - along streambottoms but with water table below 20 inches. (5) Wet meadows - water table above 20 inches. (6) Wet streambottoms - along streambottoms with water table above 20 inches.

High mountain sites generally have precipitation over 22 inches per year and temperatures associated with the high mountains; mountain climate with precipitation 16 to 22 inches annually; upland climate with 12 to 16 inches precipitation annually; semidesert climate with 8 to 12 inches annual precipitation; desert climate with 4 to 8 inches annual precipitation.

Other considerations in the range site name will include other factors which influence the kind and amount of plants present in the potential. Soil texture such as sand, clay, loam, silty, is often included. Coarse fragments in the root zone profile might be included in the name such as gravelly indicating 35 to 50% or stony indicating over 50% by volume. Lime present to the extent of influencing the kind and amount of vegetation will be shown as "limy" in the site name. Sites where a summer precipitation pattern causes plant differences will be indicated in the name as "summer prec.". If all other factors are the same but the only difference is in climax plant species, the species name may be indicated in the site name such as (pinon-juniper).

As an aid in determining the range site on a given rangeland area the "Key to Utah's Range Sites" can be used.

For detailed information on range sites contact the district conservationist at the local Soil Conservation Service office and ask for the technical range site descriptions and range condition guides found in the unit technical guide. Information concerning the soil taxonomic units grouped into each range site can be found in the Soil Survey Manual found in the local SCS office.

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

KEY TO UTAH'S RANGE SITES

I. Areas receiving moisture in addition to that falling on the site or having a water table for at least part of the plant growth season.

A. Soils affected by salt, alkali, or both.

B. Water table near the surface, within 20 inches most of the growing season, poorly drained soils.

Soils moderately affected by salt and/or alkali.

33 SCD's: Alpine, Beaver, Blacksmith Fork, Centre, Daggett, Davis, Delta, Dixie, E and I, Fremont River, Grand, Grantsville, Juab, Kane, Millard, Nebo, North Cache, Northern Utah, Piute, Price River Watershed, Salt Lake, San Juan, Sanpete, San Rafael, Sevier, South Box Elder, Timpanogos, Twin M, Uintah Basin, Upper Sevier, Vernon, Weber, West Box Elder.

2. Salt Meadows

B. Water table moderately deep, below 20 inches most of the growing season, imperfectly drained soils.

Soils mostly medium to fine textured, moderately affected by salt and/or alkali. 30 SCD's: Beaver, Blacksmith Fork, Centre, Daggett, Davis, Delta, Dixie, E and I, Fremont River, Grand, Grantsville, Juab, Kane County, Millard, Nebo, North Cache, Northern Utah, Piute, Price River Watershed, Salt Lake, San Juan, Sanpete, San Rafael, Sevier, South Box Elder, Timpanogos, Uintah Basin, Upper Sevier, Vernon, Weber.

1. Alkali Bottoms

A. Soils not affected by salt and/or alkali.

B. Water table near the surface, within 20 inches most of the growing season, poorly drained soils.

C. Usually bottom lands or gently sloping benches and flood plains with no tree or shrub cover. 37 SCD's: Alpine, Beaver, Blacksmith Fork, Canyonlands, Daggett, Davis, Dixie, E and I, Fremont River, Grand, Green River, Juab, Kamas Valley, Kane County, Morgan, Nebo, North Cache, Northern Utah, Ogden Valley, Piute, Price River Watershed, Rich, Salt Lake, San Juan, Sanpete, San Rafael, Sevier, South Box Elder, Summit, Timpanogos, Twin M, Uintah Basin, Upper Sevier, Vernon, Wasatch, Weber, West Box Elder.

5. Wet Meadows

April 1970

- C. Usually along or adjacent to stream channels and with considerable composition of shrubs and trees. 25
SCD's: Alpine, Beaver, Canyonlands, Daggett, Davis, Dixie, E and I, Fremont River, Grand, Kamas Valley, Kane, Nebo, Ogden Valley, Piute, Price River Watershed, Salt Lake, San Juan, Sanpete, San Rafael, Sevier, Summit, Uintah Basin, Upper Sevier, Wasatch, Weber.

6. Wet streambottoms

- B. Water table moderately deep, below 20 inches at least part of the growing season.

- C. Valley bottoms or gently sloping areas less than 5% slopes. Vegetation with less than 5% shrubs. 34
SCD's: Alpine, Beaver, Blacksmith Fork, Canyonlands, Daggett, Davis, Dixie, E and I, Fremont River, Grand, Juab, Kamas Valley, Kane, Morgan, Nebo, North Cache, Ogden Valley, Piute, Price River Watershed, Rich, Salt Lake, San Juan, Sanpete, San Rafael, Sevier, Summit, Timpanogos, Twin M, Uintah Basin, Upper Sevier, Vernon, Wasatch, Weber, West Box Elder.

3. Semi-wet meadows

- C. Usually along streams, undulating. Vegetation with more than 15% shrubs. 30 SCD's: Alpine, Beaver, Blacksmith Fork, Canyonlands, Centre, Davis, E and I, Grand, Juab, Kamas Valley, Kane, Morgan, Nebo, North Cache, Northern Utah, Ogden Valley, Price River Watershed, Rich, Salt Lake, San Juan, Sanpete, San Rafael, South Box Elder, Summit, Timpanogos, Uintah Basin, Upper Sevier, Vernon, Wasatch, West Box Elder.

4. Semi-wet streambottoms

- I. High mountain climatic zone. Areas receiving over 22 inches of precipitation and cool temperatures.

- A. Shallow soils (less than 20 inches) over bedrock, Lithosolic, Sol Brun Acide, Brunizem, Gray wooded, Lithosol soils.

- B. Occurs at elevations near 9,000 feet and higher, vegetation sub-alpine. 6 SCD's: Beaver, E and I, Juab, Summit, Timpanogos, Vernon.

11. Sub-alpine slopes

- B. Elevations 8,000 to 9,500 feet, soils not very stony, vegetation not sub-alpine, soils parent material basalt. Plant community with aspen overstory. 1 SCD: E and I.

18. High mountain shallow loam
(Aspen)

- A. Deep soils, mostly over 36 inches.
- B. Soils with thick A1 horizons and with well developed B2 horizons, no A2 horizons. Less than 50% stone throughout the soil profile. No tree overstory present.
- C. Soil texture loams.
 - D. Areas with considerable amounts of summer precipitation. 5 SCD's: Dixie, Grand, Kane, San Juan, and Uintah Basin (Book Cliffs).
 - 15. High mountain loam (summer prec.)
 - D. Areas with somewhat lower summer precipitation than other seasons, plant growth predominantly from winter precipitation.
 - E. Plant community with Idaho fescue. 10 SCD's: Blacksmith Fork, Canyonlands, Daggett, North Cache, Ogden Valley, Piute, Rich, San Rafael, Sevier, Uintah Basin (except Book Cliffs).
 - 14. High mountain loam (Idaho fescue)
 - E. Plant community with very little or no Idaho fescue. 18 SCD's: Alpine, Beaver, Centre, E and I, Grantsville, Juab, Kamas Valley, Morgan, Nebo, Ogden Valley, Price River Watershed, Salt Lake, Sanpete, Summit, Timpanogos, Upper Sevier, Vernon, Wasatch.
 - 13. High mountain loam
 - C. Soil texture clays. 10 SCD's: Blacksmith Fork, E and I, Fremont River, Grand, Kamas Valley, Price River Watershed, Sanpete, San Rafael, Sevier, Upper Sevier.
 - 12. High mountain clay
- B. Soils with thick A1 horizons and with well developed B2 horizons, may have some expression of A2 horizons or none. Less than 50% stone throughout profile. Aspen tree overstory present.
- C. Summer precipitation as much or more per month as other seasons. 8 SCD's: Canyonlands, Dixie, Fremont River, Grand, Kane, Piute, San Juan, Uintah Basin (Book Cliffs).
 - 17. High mountain loam (Aspen) summer prec.

- C. Summer precipitation somewhat less than other seasons, plant growth mostly from winter precipitation. 27 SCD's: Alpine, Beaver, Blacksmith Fork, Canyonlands, Centre, Daggett, E and I, Fremont River, Grantsville, Juab, Kamas Valley, Nebo, North Cache, Ogden Valley, Piute, Price River Watershed, Rich, Salt Lake, Sanpete, Sevier, Summit, Timpanogos, Uintah Basin, Upper Sevier, Vernon, Wasatch, West Box Elder.

16. High mountain loam (Aspen)

- B. Soils with thick A1 horizons and with well developed B2 horizons, over 50% stone throughout profile. Aspen tree overstory present. 19 SCD's: Alpine, Centre, Daggett, Dixie, E and I, Grantsville, Juab, Kamas Valley, Kane, Price River Watershed, Salt Lake, Sanpete, San Rafael, Sevier, Timpanogos, Uintah Basin, Upper Sevier, Vernon, Wasatch.

19. High mountain stony loam
(Aspen)

- I. Mountain climatic zone. Precipitation 16 to 22 inches annually, cool temperatures.

A. Shallow soil depth, 12 to 20 inches.

B. Soil texture, loam.

- C. Soils with more than 50% coarse fragments throughout the profile over bedrock. 8 SCD's: Blacksmith Fork, E and I, Kamas Valley, Millard, Nebo, North Cache, Sevier, Wasatch.

41. Mountain shallow stony loam

- C. Soils with less than 35% coarse fragments throughout the profile.

- D. Precipitation during summer months as much or more per month as in other seasons. 4 SCD's: Dixie, Fremont River, Kane, Piute.

40. Mountain shallow loam
(summer prec.)

- D. Precipitation considerably less per month during summer months as in other seasons. Plant growth primarily from winter precipitation.

- E. Plant community with curlleaf mahogany. 3 SCD's: Beaver, Blacksmith Fork, North Cache.

39. Mountain shallow loam
(curlleaf mahogany)

- E. Plant community without curleaf mahogany.
23 SCD's: Alpine, Beaver, Blacksmith Fork,
Centre, E and I, Grantsville, Juab, Kamas
Valley, Morgan, Millard, Nebo, North Cache,
Northern Utah, Ogden Valley, Rich, Salt
Lake, Sevier, Summit, Timpanogos, Twin M,
Vernon, Wasatch, West Box Elder.

38. Mountain shallow loam

- A. Moderately deep and deep soils, 20 inches to over 36 inches.

- B. Soils with less than 35% coarse fragments throughout
profile.

- C. Soils texture clay. 13 SCD's: Blacksmith Fork,
Juab, Kane, Morgan, Nebo, North Cache, Ogden Valley,
Piute, Rich, Sevier, Summit, Upper Sevier, West
Box Elder.

31. Mountain clay

- C. Soils texture loam.

- D. Plant community with large shrubs or trees.

- E. Plant community with Ponderosa pine overstory.
5 SCD's: Kane, Canyonlands, Grand, Piute,
San Juan.

36. Mountain loam (Ponderosa pine)

- E. Plant community with maple overstory.
6 SCD's: Blacksmith Fork, Morgan, North
Cache, Northern Utah, Ogden Valley, Rich.

34. Mountain loam (maple)

- E. Plant community with oakbrush overstory.
21 SCD's: Alpine, Beaver, Dixie, E and I,
Grand, Kamas Valley, Kane, Millard, Morgan,
Nebo, Northern Utah, Ogden Valley, Rich,
San Juan, Sanpete, Sevier, Summit, Timpanogos,
Upper Sevier, Wasatch, West Box Elder.

35. Mountain loam (oakbrush)

- D. Plant community with few or no large shrubs or trees.

- E. Precipitation during summer months as much
or more per month as in other seasons.
8 SCD's: Canyonlands, Fremont River, Grand,
Kane, Piute, San Juan, Uintah Basin (Book
Cliffs), Upper Sevier.

37. Mountain loam (summer prec.)

E. Precipitation considerably less per month during summer months as in other seasons. Plant growth primarily from winter precipitation. 34 SCD's: Alpine, Beaver, Blacksmith Fork, Canyonlands, Centre, Davis, Dixie, E and I, Fremont River, Grantsville, Juab, Kamas Valley, Kane, Millard, Morgan, Nebo, North Cache, Northern Utah, Ogden Valley, Piute, Price River Watershed, Rich, Salt Lake, Sanpete, San Rafael, Sevier, Summit, Timpanogos, Twin M, Uintah Basin, Upper Sevier, Vernon, Wasatch, West Box Elder.

33. Mountain loam

B. Soils with 35 to 50% coarse fragments in the profile.

C. Plant composition with less than 10% oakbrush. 15 SCD's: Alpine, Beaver, Canyonlands, Centre, Dixie, Fremont River, Grantsville, Juab, Kamas Valley, Kane, Millard, Nebo, Timpanogos, Vernon, Wasatch.

32. Mountain gravelly loam

C. Plant composition more than 25% oakbrush. 15 SCD's: Alpine, Davis, E and I, Grand, Kamas, Morgan, Nebo, Ogden Valley, Salt Lake, San Juan, Sevier, Summit, Timpanogos, Wasatch, Weber.

45. Mountain gravelly loam
(oakbrush)

B. Soils with more than 50% coarse fragments in profile.

C. Soil texture clay. 6 SCD's: Blacksmith Fork, Morgan, North Cache, Ogden Valley, Rich, West Box Elder.

42. Mountain stony clay

C. Soil texture loam.

D. Precipitation during summer month as much or more per month as in other seasons. 3 SCD's: Grand, Kane, San Juan.

44. Mountain stony loam
(summer prec.)

D. Precipitation considerably less per month during summer months as in other seasons. Plant growth primarily from winter precipitation. 32 SCD's: Alpine, Beaver, Blacksmith Fork, Centre, Daggett, Davis, E and I, Fremont River, Grantsville, Juab, Kamas Valley, Millard, Morgan, Nebo, North Cache, Northern Utah, Ogden Valley, Price River Watershed, Rich, Salt Lake, Sanpete, San Rafael, Sevier, South Box Elder, Summit, Timpanogos, Twin M, Uintah Basin, Upper Sevier, Vernon, Wasatch, West Box Elder.

43. Mountain stony loam

I. Upland climatic zone. Areas receiving 12 to 16 inches precipitation (occasionally as high as 18 inches) with moderate temperatures.

A. Sites with ponderosa pine, juniper and pinon. Soils deep but with coarse fragments to the extent of more than 35% of the total root zone soil profile. Precipitation during each month of summer as much or more than other months.
5 SCD's: Canyonlands, Fremont River, Kane County, Uintah Basin, Upper Sevier.

81. Upland stony loam (Pinon, Juniper, Ponderosa pine) summer prec.

A. Sites with juniper and pinon pine as overstory.

B. Precipitation during summer months as much or more per month than other months. Warm season plants such as galleta present in the potential.

C. Soils shallow, less than 20 inches deep.

D. Soil parent material shale. 4 SCD's: Canyonlands, Grand, Kane County, San Juan.

75. Upland shallow shale (Pinon Juniper) summer prec.

D. Soil parent material not shale, soil profile with enough coarse fragments to affect moisture holding capacity usually with stone covered surface.
17 SCD's: Beaver, Canyonlands, Daggett, Dixie, E and I, Fremont River, Grand, Millard, Piute, Price River Watershed, San Juan, Sanpete, San Rafael, Sevier, Twin M, Uintah Basin, Upper Sevier.

78. Upland stony hills (Juniper) summer prec.

C. Soils moderately deep and deep, over 20 inches.

D. Soil parent material basic igneous (malpais).
1 SCD: Kane County.

64. Upland malpais (Juniper Pinon) summer prec.

D. Soil parent material other than basic igneous.

E. Soils fine textured (clay). 3 SCD's: Grand, Kane County, San Juan.

52. Upland clay (Pinon Juniper) summer prec.

- E. Soils medium textured (loams).
 - F. Soils relatively lime free or not concentrated enough to affect kind and amount of plants. 4 SCD's: Dixie, Grand, Kane County, San Juan.
 - 61. Upland loam (Juniper Pinon) summer prec.
 - F. Soils with concentration of lime enough to affect kinds and amounts of plants. 2 SCD's: Dixie, Kane County.
 - 57. Upland limy loam (Pinon Juniper) summer prec.
- B. Precipitation during summer months less per month than other months. Warm season plants such as galleta not present in potential.
- C. Soils shallow less than 20 inches deep.
 - D. Soil depth limiting factor hardpan. 15 SCD's: Beaver, Canyonlands, Centre, Dixie, E and I, Fremont River, Grantsville, Juab, Kane County, Millard, Sanpete, Sevier, Twin M, Upper Sevier, Vernon.
 - 71. Upland shallow hardpan (Juniper Pinon)
 - D. Soil depth limiting factor shale. 9 SCD's: Canyonlands, E and I, Juab, Kane County, Nebo, Sanpete, Sevier, Summit, Upper Sevier.
 - 74. Upland shallow shale (Pinon Juniper)
 - D. Soil depth limiting factor not hardpan nor shale, soil profile with coarse fragments greater than 50%. 9 SCD's: Centre, Grantsville, Juab, Morgan, Nebo, Northern Utah, Rich, Vernon, West Box Elder.
 - 77. Upland stony hills (Juniper Pinon)
- C. Soils moderately deep or deep, over 20 inches.
 - D. Soil profile with more than 35% coarse fragments. 12 SCD's: Beaver, E and I, Juab, Millard, Northern Utah, Piute, Rich, Sanpete, Sevier, Twin M, Vernon, West Box Elder.
 - 80. Upland stony loam (Juniper Pinon)
 - D. Soil profile with less than 35% coarse fragments.

E. Soil texture sand or sandy. 7 SCD's:
Canyonlands, Dixie, E and I, Fremont River,
Kane County, Nebo, Vernon.

67. Upland sand (Pinon Juniper)

F. Lime not concentrated enough to affect
kind and amount of vegetation. 14 SCD's:
Beaver, Daggett, E and I, Juab, Millard,
Northern Utah, Price River Watershed,
Sanpete, San Rafael, Sevier, Twin M,
Uintah Basin, Vernon, West Box Elder.

60. Upland loam (Juniper Pinon)

F. Lime concentrated enough to affect
kind and amount of vegetation. 8 SCD's:
Beaver, Centre, Dixie, E and I, Grantsville,
Millard, Twin M, Vernon.

56. Upland limy loam (Juniper Pinon)

A. Sites without tree overstory.

B. Precipitation during summer months as much or more per
month than in other seasons. Warm season plants such
as galleta are present.

C. Soils shallow, less than 20 inches deep.

D. Depth limiting factor is a caleche hardpan.
11 SCD's: Beaver, Canyonlands, Dixie, E and I,
Fremont River, Kane, Millard, Nebo, Sanpete,
Twin M, Upper Sevier.

70. Upland shallow hardpan
(summer prec.)

D. Depth limiting factor is bedrock. 3 SCD's:
Canyonlands, Dixie, Kane.

73. Upland shallow loam
(summer prec.)

C. Soils deep to moderately deep, more than 20 inches.

D. Lime content high enough to cause a significant
difference in kind and amount of vegetation.
2 SCD's: Dixie and Kane County.

58. Upland limy loam
(summer prec.)

D. Lime content not high enough to cause a significant
difference in kind and amount of vegetation.

- E. Coarse fragments greater than 50% throughout the root zone profile. 7 SCD's: Canyonlands, E and I, Grand, Kane, San Juan, Uintah Basin, Upper Sevier.
 - 82. Upland stony loam (summer prec.)
 - E. Coarse fragments less than 35% throughout the root zone profile.
 - F. Soil texture clay or clay loam. 5 SCD's: Fremont River, Grand, Kane, Piute, Upper Sevier.
 - 53. Upland clay (summer prec.)
 - F. Soil red sandy loam. 2 SCD's: Dixie, Kane.
 - 65. Upland red sandy loam (summer prec.)
 - F. Soil texture sand, loamy sand, and sandy loam. 3 SCD's: Canyonlands, Dixie, Kane.
 - 68. Upland sand (summer prec.)
 - F. Soil texture predominantly loam varying from sandy loam to clay loam.
 - G. Extreme southern part of state in Big Plains Area. 1 SCD: Dixie.
 - 62. Upland loam (southern)
 - G. Southern part of state except Dixie's Big Plains Area. 8 SCD's: Canyonlands, Dixie, Fremont River, Grand, Kane, Piute, San Juan, Upper Sevier.
 - 63. Upland loam (summer prec.)
- B. Precipitation during summer months less per month than in other seasons. No warm season plants present in the potential.
- C. Soils shallow, less than 20 inches deep. 20 SCD's: Beaver, Blacksmith Fork, Centre, Daggett, E and I, Grantsville, Juab, Millard, Nebo, North Cache, Northern Utah, Price River Watershed, Rich, Sanpete, San Rafael, Twin M, Uintah Basin, Vernon, Wasatch, West Box Elder.
 - 72. Upland shallow loam
- C. Soils deep or moderately deep, over 20 inches.

D. Coarse fragments greater than 50% in the root zone profile.

E. Soil texture mostly loam varying from sandy loam to clay loam. 26 SCD's: Alpine, Beaver, Centre, Daggett, Davis, Fremont River, Grantsville, Juab, Kamas Valley, Millard, Nebo, Northern Utah, Piute, Price River Watershed, Rich, Salt Lake, Sanpete, San Rafael, Sevier, Summit, Timpanogos, Twin M, Vernon, Wasatch, Weber.

79. Upland stony loam

E. Soil texture clay. 2 SCD's: Sevier, Uintah Basin.

76. Upland stony clay

D. Coarse fragments, 35 to 50% in the root zone profile. 20 SCD's: Alpine, Beaver, Centre, Daggett, Davis, Dixie, E and I, Grantsville, Juab, Kamas Valley, Millard, Nebo, Northern Utah, Ogden Valley, Sanpete, Summit, Timpanogos, Upper Sevier, Vernon, Weber.

54. Upland gravelly loam

D. Coarse fragments less than 35% in the root zone profile.

E. Lime content high enough to affect a significant difference in kind and amount of potential vegetation. 9 SCD's: Beaver, Centre, E and I, Fremont River, Grantsville, Juab, Millard, Sanpete, Twin M.

55. Upland limy loam

E. Lime content not high enough to affect a significant difference in kind and amount of potential vegetation.

F. Parent material shale. 3 SCD's: Juab, Nebo, Summit.

69. Upland shale

F. Parent material other than shale or with other rocks mixed with shale.

G. Soil texture clay. 13 SCD's: Beaver, Centre, Grantsville, E and I, Juab, Morgan, Nebo, Sanpete, San Rafael, Sevier, Summit, Timpanogos, Vernon.

51. Upland clay

G. Soil texture loam. 31 SCD's:
Alpine, Beaver, Blacksmith Fork,
Centre, Daggett, Davis, E and I,
Grantsville, Juab, Kamas Valley,
Millard, Morgan, Nebo, North Cache,
Northern Utah, Ogden Valley, Price
River Watershed, Rich, Salt Lake,
Sanpete, San Rafael, Sevier, South
Box Elder, Summit, Timpanogos, Twin
M, Uintah Basin, Vernon, Wasatch,
Weber, West Box Elder.

59. Upland loam

G. Soil texture sand. 6 SCD's: Alpine,
Davis, E and I, Nebo, Vernon, Weber.

66. Upland sand

I. Semidesert climatic zone, 8 to 12 inches precipitation, moderate
to warm temperatures.

A. Sites with juniper or juniper and pinon pine as the potential
overstory.

B. Soil shallow less than 20 inches deep. 6 SCD's: Grand,
Price River Watershed, San Juan, San Rafael, Sevier,
Uintah Basin.

109. Semidesert shallow loam
(Pinon Juniper)

B. Soil deep or moderately deep, over 20 inches.

C. Coarse fragments greater than 35% in the root zone
profile.

D. Precipitation in summer months as much or more
per month than in other seasons. Warm season
plants such as galleta are present. 10 SCD's:
Canyonlands, Fremont River, Grand, Green River,
Kane, Price River Watershed, San Juan, San
Rafael, Uintah Basin, Upper Sevier.

113. Semidesert stony loam
(Juniper Pinon)
summer prec.

D. Precipitation in summer months less per month
than in other seasons. Warm season plants not
present in potential. 5 SCD's: Juab, Millard,
Northern Utah, Vernon, West Box Elder.

112. Semidesert stony loam
(Juniper Pinon)

- C. Coarse fragments less than 35% in the root zone profile.
- D. Lime present to the extent of significantly influencing the kind and amount of potential vegetation. 1 SCD: Twin M.
 - 97. Semidesert limy loam (Juniper Pinon)
- D. Lime not enough to influence kind and amount of potential vegetation.
- E. Soil texture sand. 3 SCD's: Centre, Grantsville, Vernon.
 - 103. Semidesert sand (Juniper)
- E. Soil texture loam.
- F. Precipitation in summer months as much or more per month than in other seasons. Warm season plants such as galleta are present. 1 SCD: Fremont River.
 - 100. Semidesert loam (Juniper Pinon) summer prec.
- F. Precipitation in summer months less per month than in other seasons. No warm season plants in the potential. 2 SCD's: Northern Utah, West Box Elder.
 - 99. Semidesert loam (Juniper)
- A. Sites without juniper or juniper and pinon pine as the potential overstory.
- B. Precipitation in summer months as much or more per month than in other seasons. Warm season plants such as galleta are present.
- C. Coarse fragments 35 to 50% in the root zone profile. 12 SCD's: Beaver, Canyonlands, Dixie, E and I, Kane, Millard, Piute, Price River Watershed, San Rafael, Twin M, Uintah Basin, Upper Sevier.
 - 95. Semidesert gravelly loam (summer prec.)
- C. Coarse fragments less than 35% in the root zone profile.
- D. Soil texture clay. 2 SCD's: Canyonlands, Kane.
 - 93. Semidesert clay (summer prec.)

D. Soil texture loam.

E. Coarse fragments less than 50% in soil profile - soils deep. 15 SCD's: Beaver, Canyonlands, Dixie, E and I, Fremont River, Grand, Green River, Kane, Millard, Piute, Price River Watershed, San Juan, San Rafael, Uintah Basin, Upper Sevier.

101. Semidesert loam
(summer prec.)

E. Coarse fragments over 50% in the root zone profile, soils shallow - about 20" deep or less. 6 SCD's: Alpine, Centre, Delta, Grantsville, Juab, Vernon.

114. Semidesert stony hills
(summer prec.)

D. Soil texture sand. 10 SCD's: Canyonlands, Dixie, Fremont River, Grand, Green River, Kane, Price River Watershed, San Juan, San Rafael, Uintah Basin.

104. Semidesert sand
(summer prec.)

B. Precipitation in summer months less per month than in other seasons, no warm season plants in the potential.

C. Soil shallow, less than 20 inches deep.

D. Depth limiting factor indurated hardpan. 3 SCD's: Nebo, Sanpete, West Box Elder.

105. Semidesert shallow hardpan

D. Depth limiting factor bedrock of various kinds - sandstone, limestone, etc. but not indurated hardpan.

E. Precipitation 8 to 10 inches annually. 4 SCD's: Price River Watershed, San Rafael, Sanpete, Uintah Basin.

107. Semidesert shallow loam
8-10" pz

E. Precipitation 10 to 12 inches annually. 7 SCD's: Beaver, Canyonlands, Fremont River, Kane, Price River Watershed, Sanpete, Uintah Basin.

108. Semidesert shallow loam
10-12" pz

C. Soil deep or moderately deep, over 20 inches.

D. Coarse fragments over 50% in the root zone profile. 15 SCD's: Centre, Dixie, E and I, Grand, Grantsville, Juab, Nebo, Piute, Price River Watershed, San Juan, Sanpete, San Rafael, Sevier, Uintah Basin, Vernon.

111. Semidesert stony loam

D. Coarse fragments 35 to 50% in the root zone profile. 10 SCD's: Centre, Grantsville, Juab, Nebo, Northern Utah, Rich, Sanpete, Sevier, Vernon, West Box Elder.

94. Semidesert gravelly loam

D. Coarse fragments less than 35% in the root zone profile.

E. Soil with alkali (sodium) concentration strong enough to affect kind and amount of vegetation. Soil usually with a strongly developed solonetz horizon. 26 SCD's: Alpine, Beaver, Canyonlands, Centre, Delta, Dixie, E and I, Grand, Grantsville, Green River, Juab, Kane, Millard, Nebo, Northern Utah, Piute, Price River Watershed, Salt Lake, San Juan, Sanpete, San Rafael, Sevier, Twin M, Uintah Basin, Vernon, West Box Elder.

91. Semidesert alkali flats

E. Soil not affected with salt and alkali strong enough to affect kind and amount of vegetation.

F. Lime concentrated enough to affect kind and amount of vegetation produced. 19 SCD's: Beaver, Canyonlands, Centre, Daggett, Dixie, E and I, Fremont River, Grand, Grantsville, Juab, Millard, Price River Watershed, San Juan, Sanpete, San Rafael, Twin M, Uintah Basin, Upper Sevier, Vernon.

96. Semidesert limy loam

F. Lime not concentrated enough to significantly affect kind and amount of vegetation produced.

G. Soil texture clay. 7 SCD's: E and I, Juab, Millard, Nebo, Rich, Vernon, West Box Elder.

92. Semidesert clay

G. Soil texture silt loam. 16 SCD's:
Beaver, Centre, Dixie, E and I,
Grantsville, Juab, Millard, Nebo,
Northern Utah, Price River Watershed,
Sanpete, San Rafael, Twin M, Uintah
Basin, Vernon, West Box Elder.

110. Semidesert silt loam

G. Soil texture loam. 11 SCD's:
Alpine, Centre, Grantsville, Juab,
Nebo, Northern Utah, Rich, Sanpete,
Sevier, Vernon, West Box Elder.

98. Semidesert loam

G. Soil texture sand. 10 SCD's:
Alpine, Beaver, Centre, Delta, Juab,
Millard, Nebo, Northern Utah, Vernon,
West Box Elder.

102. Semidesert sand

I. Desert climatic zone, 4 to 8 inches precipitation, warm to hot
temperatures.

A. Shallow soils, less than 20 inches, with shale parent material.
8 SCD's: Canyonlands, Grand, Green River, Kane, Price River
Watershed, San Rafael, Uintah Basin, Upper Sevier.

128. Desert shallow shale

A. Soils deep or moderately deep over 20 inches.

B. Topography bottomlands with occasional run-in of moisture.
6 SCD's: Beaver, Delta, E and I, Millard, Twin M, West
Box Elder.

121. Desert bottoms

B. Topography mountainous. 1 SCD: West Box Elder.

126. Desert mountain

B. Topography other than bottomlands with run-in or mountainous
areas.

C. Coarse fragments 35 to 50% in the root zone profile.
4 SCD's: Delta, E and I, Millard, Twin M.

123. Desert gravelly loam

C. Coarse fragments less than 35% in the root zone
profile.

D. Parent material is shale. 4 SCD's: Grand, Price
River Watershed, San Rafael, Uintah Basin.

125. Desert loamy shale

D. Parent material not shale, includes alluvial
soils.

E. Soil textures silt loam, silty clay loam, and silty clay, somewhat dispersed.

F. Dominantly winterfat with 25% or more shadscale. 9 SCD's: Beaver, Centre, Delta, E and I, Grantsville, Millard, Twin M, Vernon, West Box Elder.

122. Desert flats

F. Dominant plant is winterfat with 5% or less of shadscale. 1 SCD: Delta.

131. Desert silt flats

F. Dominant plant is greasewood. 10 SCD's: Delta, Grand, Grantsville, Juab, Green River, Price River Watershed, San Juan, San Rafael, Uintah Basin, Vernon.

133. Desert alkali flats

F. Dominant plant is Nuttall's saltbush. 1 SCD: Delta.

132. Desert salt flats

E. Soil texture loam.

F. Not enough salt and alkali for such plants as alkali sacaton, saltgrass, inkweed, and gray molly. 14 SCD's: Centre, Delta, E and I, Grand, Grantsville, Green River, Juab, Price River Watershed, San Juan, San Rafael, Twin M, Uintah Basin, Vernon, West Box Elder.

124. Desert loam

F. Enough salt and alkali in the soil that such plants as alkali sacaton, saltgrass, inkweed and gray molly are present.

3 SCD's: Delta, Juab, Vernon.

130. Desert alkali bench

E. Soil texture sand.

F. Not enough salt and alkali for alkali sacaton and greasewood to be present. 7 SCD's: Grand, Green River, Price River Watershed, San Juan, San Rafael, Twin M, Uintah Basin.

127. Desert sand

F. Enough salt and alkali occur so that alkali sacaton and greasewood are present. 1 SCD: Delta.

129. Desert alkali sand

Tables of Range Yield and Composition

Yield and plant composition information is shown for each range site in the following tables. It is shown separately for each range condition. It is summarized as a total for all soils in each condition class and for each soil taxonomic unit in each range condition. The figures in the "Total Annual Yield" column are pounds per acre air dry. The two columns in "Favorable Years" include the high yield found on a transect of at least 5 plots and the average yield for all favorable years. The two columns in "Unfavorable Years" show the average yield of all data taken in unfavorable years and the low yield found on a transect of 5 or more plots. Where a column is blank no data has been taken to date. The line "Maximum Each Species" gives the maximum percent composition found for each species on any transect of 5 or more plots for all the data taken in each condition class. This is an aid to setting up range condition guides (from data in the highest range condition found) and in determining whether a certain plant is decreaser, increaser or invader (by comparing the maximums in each condition class).

Plant species are listed by common names with grasses and grass-like plants on the left, forbs in the center and shrubs and trees on the right. For scientific names see the Plant List in the back of this document. The figures in the columns are percent composition by air dry weight. Each line should total 100 percent except for "Maximum Each Species". For those which total less than 100 percent the "traces" of all other plants will bring the total to 100. Occasionally a line totals over 100 percent. This occurs due to rounding out the figures to even percentages to avoid use of fractions or decimals.

RANGE YIELD AND COMPOSITION

ALKALI BOTTOMS

Range Condition	Soil Taxonomic Unit	Total Annual Yield				Number of Plots	Species Composition (Percent)					
							Favorable Years		Unfavorable Years		Grasses	
		High	Average	Average	Low			Saltgrass	Alkali Sacaton	Pickleweed	Inkweed	Nuttalls Saltbush
Excellent		-	-	1,000	1,000	2	10	90	-	-	-	-
Good		1,473	1,473	-	-	10	16	-	33	8	34	9

RANGE YIELD AND COMPOSITION
SALT MEADOW

Range Condition	Soil Taxonomic Unit	Total Annual Yield				Number of Plots	Species Composition (Percent)																
		Favorable Years		Unfavorable Years			Grasses				Forbs						Shrubs						
							High	Average	Average	Low	Saltgrass	Baltic Rush	Alkali Sacaton	Ticklegrass	Arrowgrass	Pickleweed		Owllover	Daisy	Aster	Others	Annual Saltweed	Inkweed
Good	All soils	1,410	1,310	966	789	70	14	1	52	1	2	19	6	2	T	1	-	-	-	-	-	-	-
	Maximum each species	-	-	-	-	-	37	4	93	9	6	38	22	16	2	5	-	-	-	-	-	-	-
	Poganeab s1c1	1,410	1,410	-	-	10	37	4	59	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Average	1,382	1,276	966	789	60	10	1	51	2	2	23	7	3	T	1	-	-	-	-	-	-	-
Fair	All soils	-	-	-	-	-	19	4	93	9	6	38	22	16	2	5	-	-	-	-	-	-	-
	Maximum each species	4,232	3,006	1,648	1,446	50	77	1	8	-	-	-	3	-	-	-	3	4	2	1	7	-	-
	Average	-	-	-	-	-	100	7	37	-	-	-	16	-	-	-	16	20	11	-	-	-	-
	Poganeab s1c1	2,773	2,773	1,580	1,580	20	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Poganeab c1	4,232	3,590	2,132	1,905	20	89	-	T	-	-	-	-	-	-	-	8	-	-	-	-	-	2

RANGE YIELD AND COMPOSITION

SEMIWET MEADOW

Range Condition	Soil Taxonomic Unit	Total Annual Yield			Number of Plots	Species Composition (Percent)																															
						Grasses										Forbs									Shrubs												
		Favorable Years		Unfavorable Years		High	Average	Average	Low	Slender Wheatgrass	Letterman Needlegr.	Mountain Brome	Smooth Brome	Broadleaf Sedge	Redtop	Horsetail	Foxtail	Tall Native Bluegr.	Timothy	Tufted Hairgrass	Meadow Foxtail	Yarrow	Western Coneflower	Senecio	Peavine	Tarweed	Annals	Stellaria	Violet	Geranium	Lupine	Aster	Others	Mulesear Dock	Silver sagebrush		
Good	All soils Average	4,164	4,164	1,649	490	41	18	T 16	9	9	11	2	1	-	-	-	-	-	-	-	-	-	T	T	T	T 19	4	1	1	2	3	1	T	-	-	-	
	Maximum each species	-	-	-	-	-	53	20	22	12	38	47	7	5	-	-	-	-	-	-	-	8	8	10	26	5	2	2	3	4	1	2	-	-	-	-	
	Wet spots (Wasatch)	-	-	490	490	1	53	20	-	-	-	-	-	-	-	-	-	-	-	-	-	8	8	10	-	-	-	-	-	-	-	-	-	-	-	-	
	Mixed alluvial land (North Cache)	4,164	4,164	-	-	10	-	-	-	38	47	7	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	
Fair	Ant Flat loam (Irr.)	4,531	3,819	-	-	30	1	-	-	63	-	-	-	-	2	13	11	4	-	-	-	-	-	-	-	-	-	-	-	2	-	-	2	2	2	-	-
	All soils Average	4,324	3,995	1,734	1,470	58	T 12	T	-	57	-	-	-	-	2	2	3	1	T	-	-	T	-	-	-	-	-	-	-	1	-	-	2	2	1	16	
Poor	Maximum each species	-	-	-	-	-	1	68	1	89	-	-	-	-	6	8	12	4	1	-	-	1	-	-	-	-	-	-	-	6	-	14	3	1	55		
	Wet spots (Wasatch)	-	-	1,734	1,470	18	T 36	T	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	-	-	53		
	Ant Flat loam (Irr.)	4,324	3,995	-	-	40	-	-	-	83	-	-	-	-	3	3	4	1	T	-	-	T	-	-	-	-	-	-	-	2	-	-	2	1	-	-	

RANGE YIELD AND COMPOSITION
SEMIWET STREAMBOTTOMS

Range Condition	Soil Taxonomic Unit /	Total Annual Yield				Number of Plots	Species Composition (Percent)																											
		Favorable Years		Unfavorable Years			Grasses								Forbs										Shrubs									
							High	Average	Average	Low	Kentucky Bluegrass	Columbia Needleg.	Broadleaf Sedge	Baltic Rush	Letterman Needleg.	Blue Wildrye	Bearded wheatgrass	Cheatgrass	Horsetail	Oyster Plant	Yarrow	Dandelion	Bedstraw	Goldenrod	Lily-of-the-Valley	Canada thistle	Stickseed	Annals	Geranium	Bull Thistle	Verbena	Big Sagebrush	Chokecherry	Dogwood
Good	Mixed alluvial land (Wasatch)	-	-	1,754	1,754	10	78	1	T	2	T	T	T	-	-	1	2	1	1	1	4	1	1	-	-	-	-	T	1	1	1	2		
Fair	Mixed alluvial land (Wasatch)	2,256	2,256	-	-	10	48	-	15	2	-	-	3	2	8	1	T	T	T	-	-	-	1	1	1	1	1	16	-	-	-	-		

RANGE YIELD AND COMPOSITION

WET MEADOW

[illegible]

RANGE YIELD AND COMPOSITION
HIGH MOUNTAIN CLAY

Range Condition	Soil Taxonomic Unit	Total Annual Yield				Number of Plots	Species Composition (Percent)																								Shrubs																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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		Favorable Years		Unfavorable Years			Slender Wheatgrass	Smooth Brome	Crested Wheatgrass	Letterman Needlegr.	Orchardgrass	Prairie Junegrass	Sheep Fescue	Tall Native Bluegr.	Western Wheatgrass	Great Basin Wildrye	Sandberg Bluegrass	Indian Paintbrush	Aster	Astragalus	Skeleton Loco	Annuals	Lomatium	Geranium	Yarrow	Astragalus	Phlox	Bluebell	Peavine	Stoneseed	Little Sunflower	Mulsear Dock	Deathcamas																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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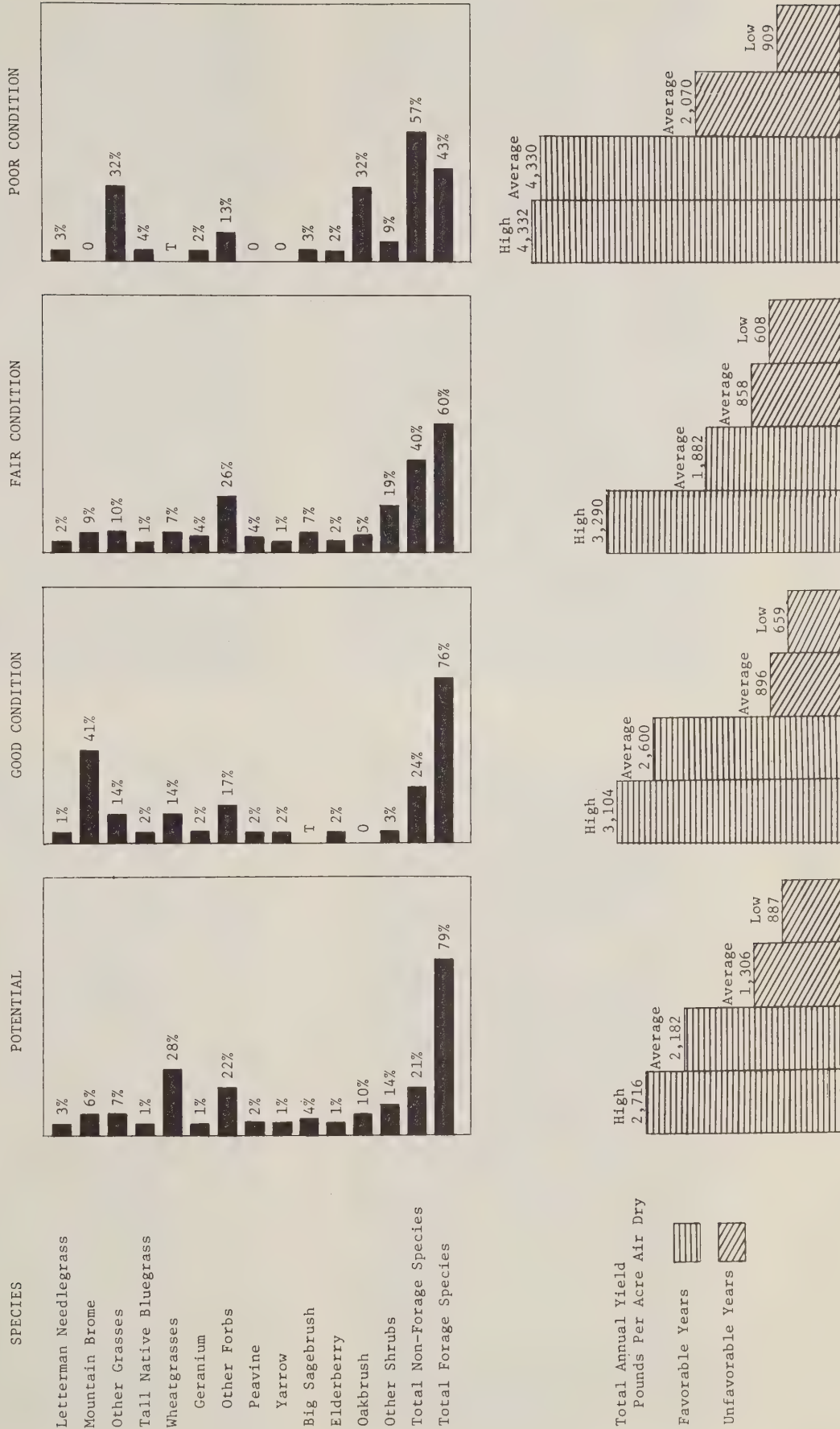
RANGE YIELD AND COMPOSITION

HIGH MOUNTAIN LOAM

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YIELD AND VEGETATION COMPOSITION

High Mountain Loam Range Site



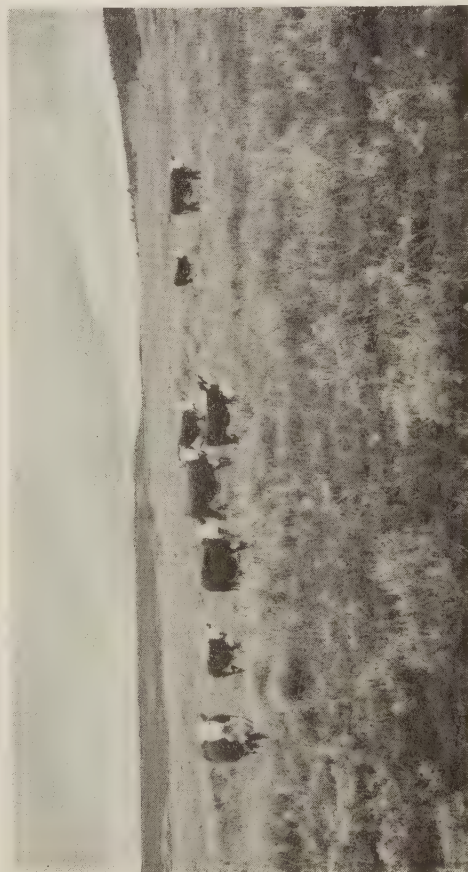
HIGH MOUNTAIN LOAM RANGE SITE



EXCELLENT CONDITION



GOOD CONDITION



FAIR CONDITION



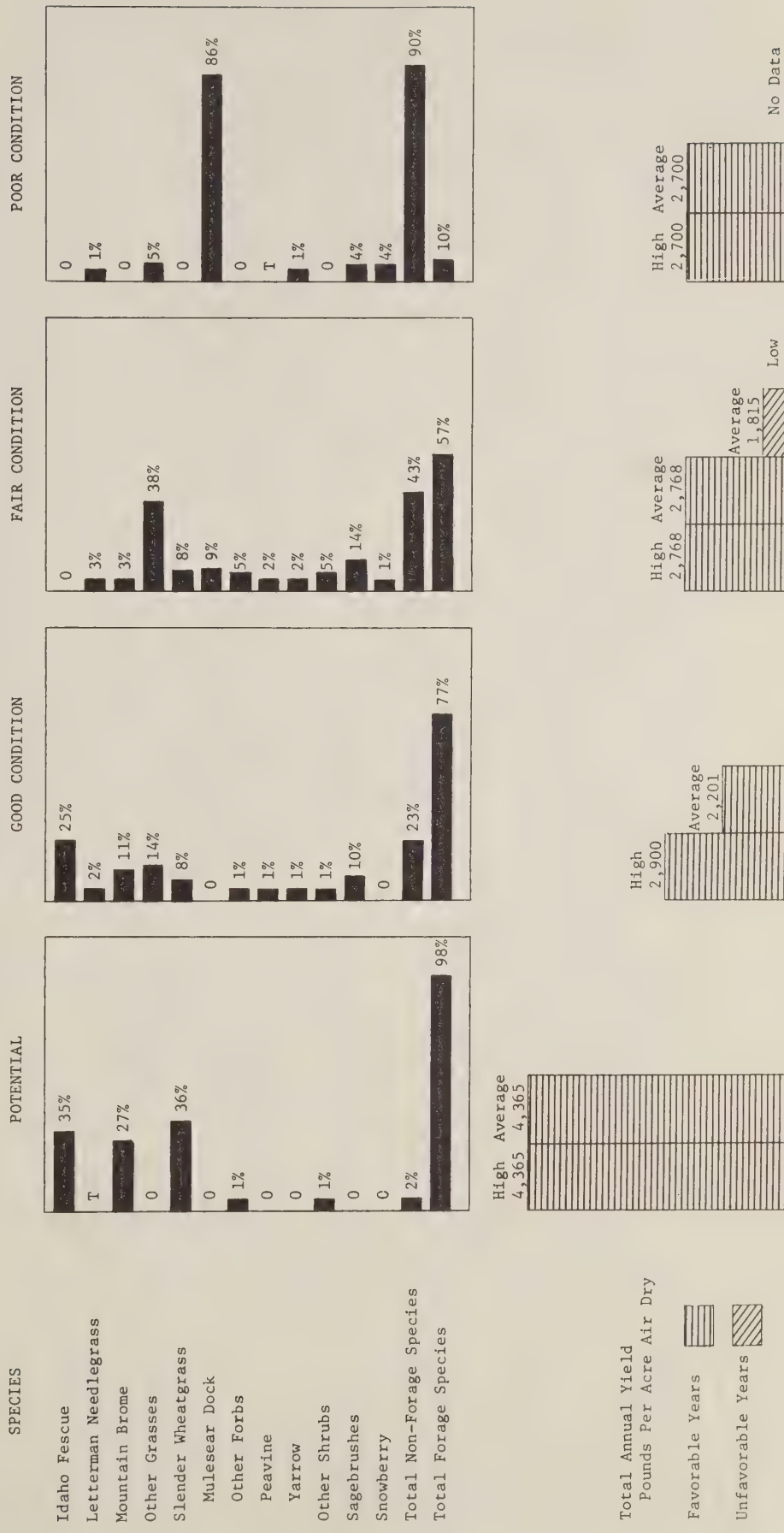
POOR CONDITION

RANGE YIELD AND COMPOSITION
HIGH MOUNTAIN LOAM (IDAHO FESCUE)

Range Condition	Soil Taxonomic Unit	Total Annual Yield				Number of Plots	Species Composition (Percent)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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		Favorable Years		Unfavorable Years			Mountain Brome	Slender Wheatgrass	Idaho Fescue	Columbia Needlegr.	Sheep Fescue	Oniongrass	Letterman Needlegr.	Tall Native Bluegr.	Dryland Sedge	Nodding Brome	Prairie Junegrass	Kentucky Bluegrass	Others	Bluebunch Wheatgr.	Great Basin Wildrye	Tall Larkspur	Horsemint	Geranium	Aster	Others	Lupine	Sneezeweed	Yarrow	Peavine	Stellaria	Dandelion	Knotweed	American Vetch	Native Clover	Shooting Star	Mountain Dandelion	Bedstraw	Mulsear Dock	Others	Big Sagebrush	Snowberry	Threetip Sagebrush	Yellowbrush	Silver Sagebrush	Rose																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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YIELD AND VEGETATION COMPOSITION

High Mountain Loam (Idaho Fescue) Range Site



RANGE YIELD AND COMPOSITION
HIGH MOUNTAIN LOAM (ASPEN) SUMMER PRECIPITATION

Range Condition	Soil Taxonomic Unit	Total Annual Yield			Number of Plots	Species Composition (Percent)																													
						Grasses												Forbs								Shrubs									
		Favorable Years		Unfavorable Years		Slender Wheatgrass	Nodding Brome	Columbia Needlegr.	Thurbers Rescue	Dryland Sedge	Others	Kentucky Bluegrass	Letterman Needlegr.	Cinquefoil	Poison Vetch	Sweetanise	Wild Carrot	Meadowrue	Yarrow	Others	Stellaria	Peavine	Tall Larkspur	Butterweed	Daisy	Horsemint	Dandelion	Sneezeweed	Violet	Astragalus	Concolor Fir	Aspen	Snowberry	Rose	
		High	Average	Average		Low	3,202	3,202	554	554	30	19	4	1	11	21	-	-	1	3	1	1	1	2	2	-	-	-	-	-	-	-	-	27	3
Excellent	All soils	-	-	-	-	46	6	1	14	22	-	-	1	4	2	2	2	2	2	2	-	-	-	-	-	-	-	-	-	-	-	30	4	4	
Good	All soils	4,141	3,192	778	778	50	12	T	1	2	10	1	1	-	-	-	1	1	1	1	5	1	2	1	1	1	1	1	1	1	2	52	1	-	
	Maximum each species	-	-	-	-	-	32	1	4	4	13	1	2	-	-	-	2	2	1	1	5	2	4	3	4	7	4	7	3	2	-	6	65	1	-
Poor	All soils	8,280	8,280	1,895	1,889	40	-	T	T	1	5	4	-	2	T	2	-	-	-	1	5	-	-	-	-	-	-	2	-	-	1	77	T	-	
	Maximum each species	-	-	-	-	-	-	T	2	5	6	5	-	2	1	3	-	-	-	3	5	-	-	-	-	-	-	3	-	-	77	1	-		

RANGE YIELD AND COMPOSITION
HIGH MOUNTAIN LOAM (SUMMER PRECIPITATION)

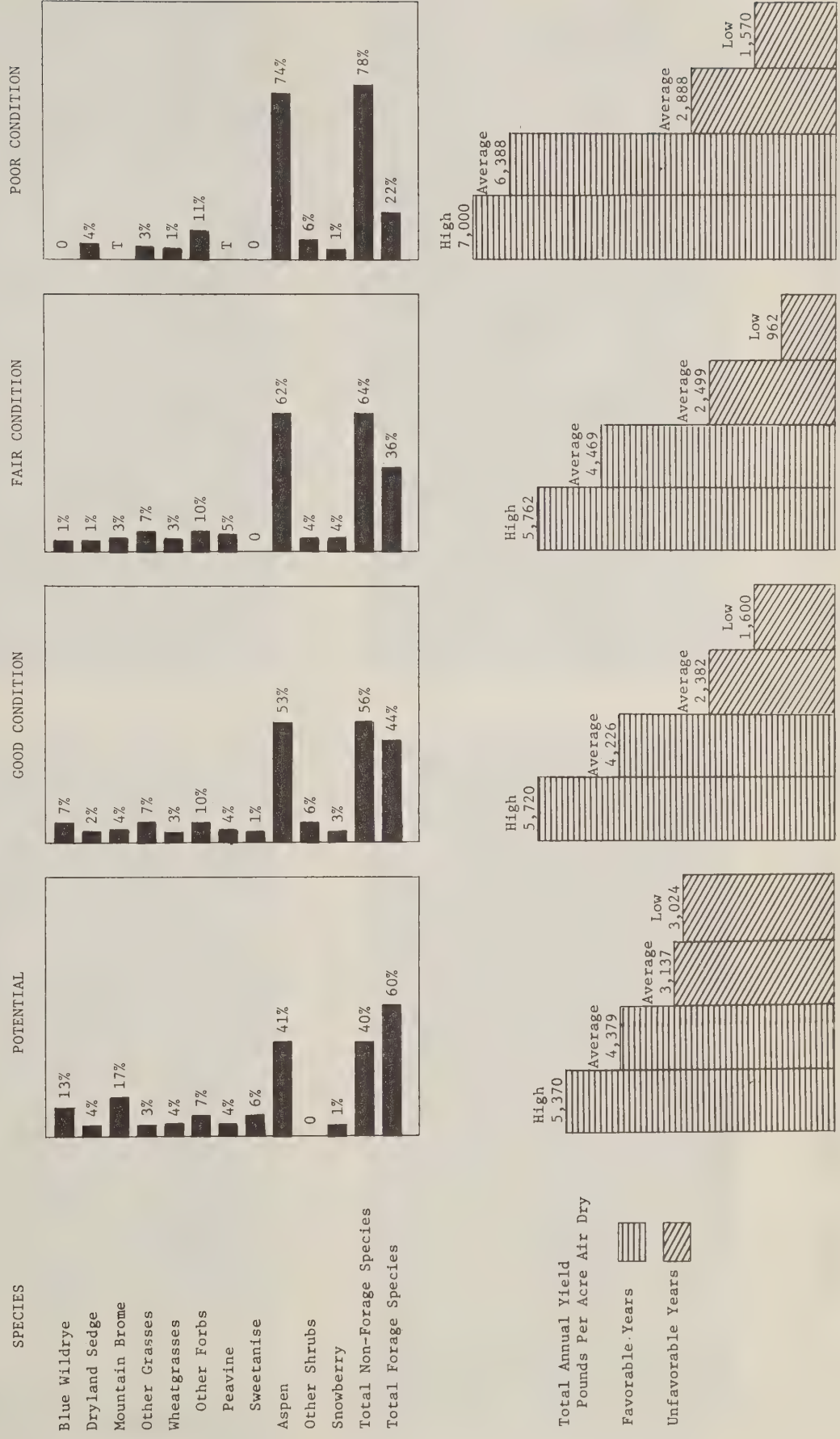
Range Condition	Soil Taxonomic Unit	Total Annual Yield				Number of Plots	Species Composition (Percent)																
		Favorable Years		Unfavorable Years			Grasses								Forbs								
							High	Average	Average	Low	Letterman Needlgr.	Thurbers Fescue	Sheep Fescue	Mountain Brome	Slender Wheatgrass	Columbia Needlgr.	Others	Bearded Wheatgrass	Ontongrass	Peavine	Yarrow	Dandelion	Daisy
Good	All soils	3,166	3,142	-	-	11	5	60	4	T	T	T	6	-	-	10	2	1	3	-	-	-	-
	Maximum each species	-	-	-	-	-	6	75	45	5	5	5	6	-	-	11	2	1	3	-	-	-	-
Fair	All soils	-	-	-	918	3	13	-	-	-	10	-	2	3	4	19	-	3	-	13	5	28	-
	Maximum each species	-	-	-	-	-	13	-	-	-	10	-	2	3	4	19	-	3	-	13	5	28	-

RANGE YIELD AND COMPOSITION
HIGH MOUNTAIN LOAM (ASPEN) continued

Range Condition	Soil Taxonomic Unit	Total Annual Yield				Number of Plots	Species Composition (Percent)																																				
							Grasses										Forbs										Shrubs																
		Favorable Years		Unfavorable Years			High	Average	Low	Mountain Brome	Bearded Wheatgrass	Others	Columbia Needleg.	Letterman Needleg.	Tall Native Bluegr.	Dryland Sedge	Kentucky Bluegrass	Slender Wheatgrass	Blue Wildrye	Great Basin Wildrye	Tarweed	Buckwheat	Stickseed	Butterweed	Others	Meadowrue	Peavine	Geranium	Horsemint	Western Coneflower	Senecio	Yarrow	Lupine	Tall Larkspur	Aster	Bluebell	Knotweed	Elderberry	Chokecherry	Others	Ninebark	Aspen	Snowberry
Fair	All soils	5,762	4,469	2,499	962	440	3	1	3	2	1	1	1	1	1	2	1	1	-	-	T	1	4	1	5	T	1	1	T	T	1	1	-	-	-	-	-	-	2	2	62	4	
	Maximum each species	-	-	-	-	-	14	14	10	19	27	T	13	8	14	2	-	-	4	5	2	10	3	14	4	4	11	4	4	12	14	-	-	-	-	-	-	-	9	19	70	31	
	Roundy loam	5,762	5,762	2,798	2,395	48	2	1	7	T	-	-	-	-	-	-	1	-	-	1	-	3	T	2	1	T	2	T	-	-	-	-	1	-	-	-	-	-	5	8	64	2	
	Lucky Star gr sil	5,381	5,102	2,981	2,354	88	8	3	1	-	-	-	T	-	-	-	3	1	2	-	-	-	-	2	3	T	1	3	1	-	3	-	-	-	-	-	2	2	-	66	1		
	Hailstone loam	4,020	3,994	-	-	5	2	-	2	-	2	-	T	-	-	-	2	-	-	3	1	-	2	1	3	-	-	-	-	-	-	-	-	10	8	1	-	58	5				
	Baird loam	3,533	3,533	1,514	1,514	4	5	-	2	-	6	-	7	-	-	-	-	3	-	-	-	-	6	T	5	T	-	1	2	-	-	-	4	-	-	-	-	3	-	57	-		
	Kamas soils	4,020	4,020	-	-	60	2	-	1	-	-	-	1	-	2	2	-	-	-	-	1	-	2	3	3	12	-	1	2	-	-	-	-	-	-	-	-	-	66	3			
	Mud Flat soils	3,966	3,966	2,011	2,011	120	1	-	2	2	-	-	-	-	1	1	-	-	-	-	1	1	2	6	-	5	1	1	-	-	-	-	-	-	-	-	-	1	-	66	7		
	Scave sil	4,006	4,006	-	-	10	6	-	-	-	-	-	-	-	-	14	-	-	-	-	-	-	-	4	2	2	-	2	-	-	-	-	-	-	-	-	-	-	-	68	-		
	Skyline loam	-	-	962	962	20	2	-	5	-	-	-	7	1	3	-	-	-	-	-	-	-	-	16	1	4	-	2	-	-	-	-	1	-	-	-	-	-	7	14	6	31	
Poor	All soils	7,000	6,388	2,888	1,570	83	T	-	2	T	T	4	-	1	1	-	1	1	-	1	-	T	6	-	T	-	T	2	-	T	-	-	-	-	2	4	-	2	-	74	1		
	Maximum each species	-	-	-	-	-	5	-	5	5	9	1	28	-	3	-	53	3	-	-	2	-	5	-	-	-	3	9	-	4	-	-	-	-	-	3	13	-	5	-	79	6	
	Roundy loam	4,722	4,722	3,042	2,605	48	T	-	4	-	-	T	T	-	T	-	T	-	-	-	-	-	5	-	-	-	2	-	-	-	-	-	-	-	3	6	-	2	-	76	-		
	Lucky Star sil	7,000	7,000	3,026	3,026	16	1	-	-	-	-	-	-	-	-	2	-	-	-	-	-	3	3	-	-	-	2	5	-	1	-	-	-	-	-	-	-	1	77	5			
	Skyline loam	4,580	4,580	-	-	2	5	-	-	-	-	-	-	-	1	-	-	-	-	-	3	4	-	2	-	-	-	2	-	-	-	-	-	-	-	4	-	-	-	77	-		

YIELD AND VEGETATION COMPOSITION

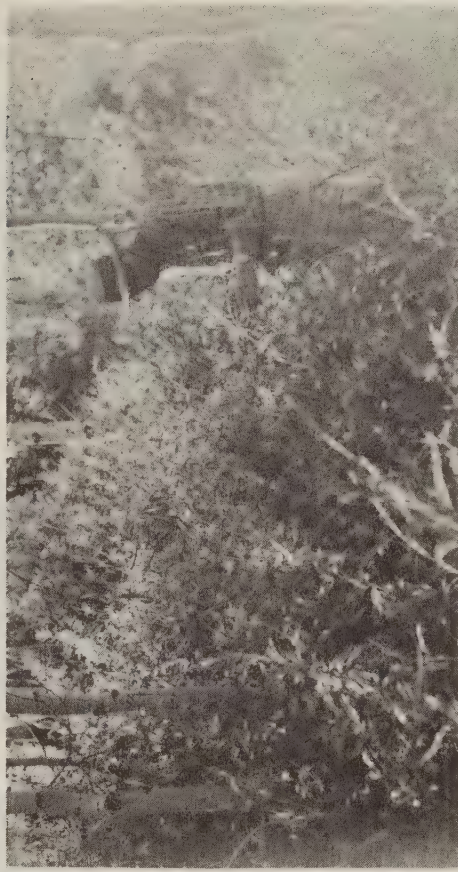
High Mountain Loam (Aspen) Grazable Woodland Site



HIGH MOUNTAIN LOAM (ASPEN) GRAZABLE WOODLAND SITE



EXCELLENT CONDITION



GOOD CONDITION



FAIR CONDITION

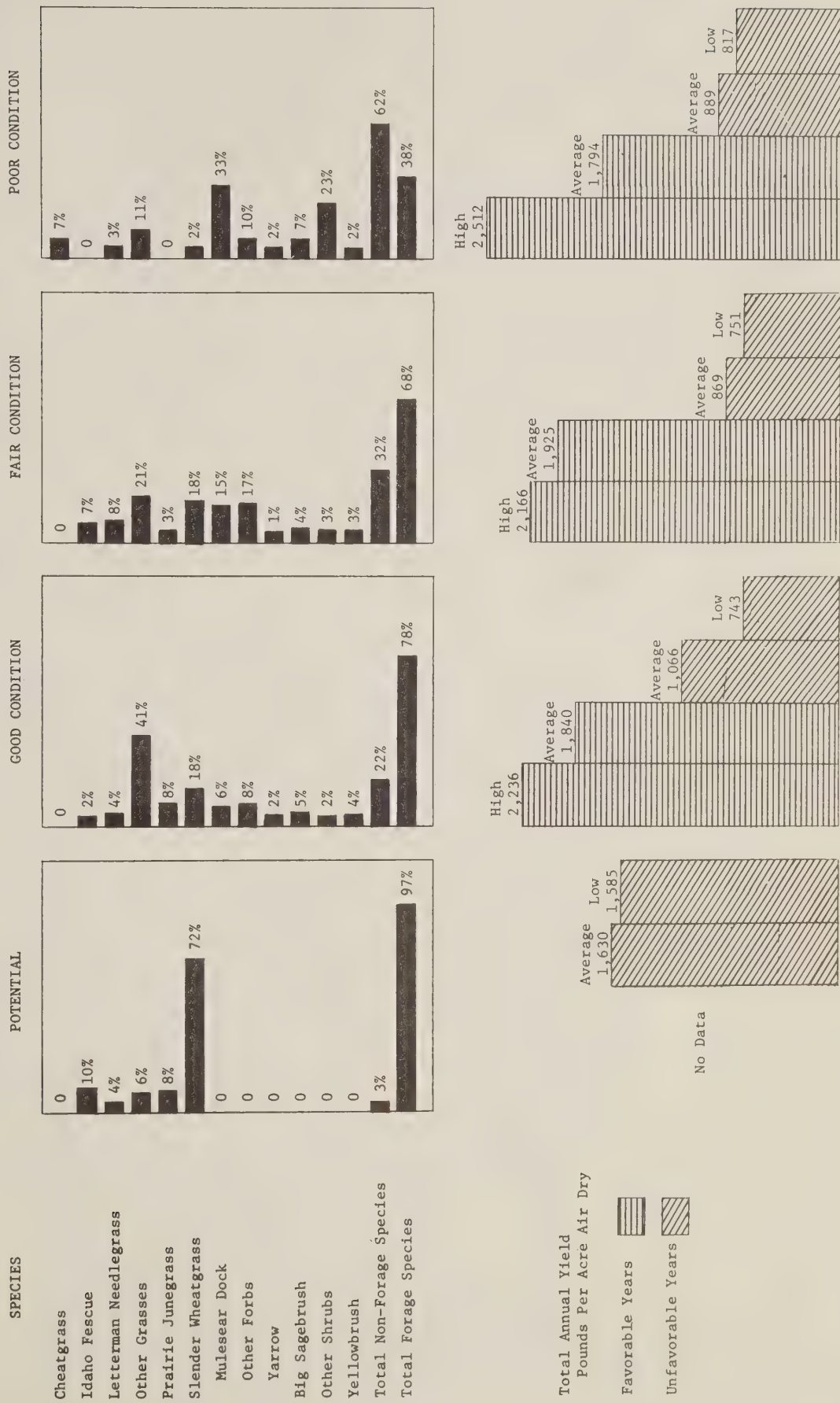


POOR CONDITION

Range Condition	Soil Taxonomic Unit	Total Annual Yield			Number of Plots	Species Composition (Percent)																															
						Grasses								Forbs						Shrubs																	
		Favorable Years		Unfavorable Years		Mountain Brome	Blue Wildrye	Kentucky Bluegrass	Ontongrass	Columbia Needleg.	Slender Wheatgrass	Bearded Wheatgrass	Others	Senecio	Peavine	Tall Larkspur	Waterleaf	Annals	Sweetanise	Horsemint	Meadowtrue	Peavine	Others	Aster	Knotweed	Bluebell	Columbine	Yarrow	Others	Elderberry	Aspen	Rose	Mountain Myrtle	Ninebark	Snowberry	Serviceberry	
																														High	Average	Average	Low	Ceanothus			
Good	All soils	-	-	2,160	2,160	10	1	6	-	-	-	-	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36	1	7	37	1	1	
		-	-	-	-	-	1	6	-	-	-	-	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36	1	7	37	1	1		
	Lucky Star gravel	-	-	2,160	2,160	10	1	6	-	-	-	-	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36	1	7	37	1	1		
Fair	All soils	2,829	2,582	1,650	1,343	71	2	1	1	2	2	1	-	-	3	1	1	5	9	11	3	3	5	-	-	-	-	-	-	1	2	39	1	-	6	1	T
		-	-	-	-	-	8	2	33	24	9	12	4	-	-	6	2	2	13	16	24	15	5	21	-	-	-	-	-	3	4	55	2	-	22	3	1
	Daybell gravel	2,390	2,336	-	-	20	T	-	-	-	4	6	2	3	-	-	-	T	6	2	9	5	16	2	1	2	-	-	-	-	-	42	T	-	-	-	-
	Lucky Star gravel	2,829	2,829	-	-	20	8	2	-	-	-	1	-	-	-	-	-	-	1	-	2	2	2	-	1	-	1	-	2	3	-	48	2	-	22	3	1

YIELD AND VEGETATION COMPOSITION

Mountain Clay Range Site



RANGE YIELD AND COMPOSITION
MOUNTAIN CLAY

Range Condition	Soil Taxonomic Unit	Total Annual Yield			Number of Plots	Species Composition (Percent)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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		Favorable Years		Unfavorable Years		High	Average	Low	Slender Wheatgrass	Idaho Rescue	Columbia Needlegr.	Prairie Junegrass	Letterman Needlegr.	Others	Oniongrass	Great Basin Wildrye	Bluebunch Wheatgr.	Tall Native Bluegr.	Squirreltail	Sandberg Bluegrass	Kentucky Bluegrass	Sheep Rescue	Blue Wildrye	Western Wheatgrass	Cheatgrass	Oxytropis	Annals	Yarrow	Mulesear Dock	Little Sunflower	Others	Geranium	Peavine	Snowberry	Low Sagebrush	Bitterbrush	Others	Big Sagebrush	Serviceberry	Yellowbrush																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							

RANGE YIELD AND COMPOSITION

MOUNTAIN GRAVELLY LOAM

Range Condition	Soil Taxonomic Unit	Total Annual Yield				Number of Plots	Species Composition (Percent)												
							Grasses			Forbs		Shrubs							
		Favorable Years		Unfavorable Years			Bluebunch Wheatgr.	Nevada Bluegrass	Tall Native Bluegr.	Cheatgrass	Squirreltail	Peavine	Goldenrod	Rockcress	Big Sagebrush	Oakbrush	Snowberry	Yellowbrush	Birchleaf Mahogany
Excellent	All soils	2,340	2,340	780	780	2	42	19	28	-	-	-	-	-	-	-	-	1	10
	Maximum each species	-	-	-	-	-	81	38	57	-	-	-	-	-	-	-	-	1	19
	Bergi gravel	-	-	780	780	1	3	38	57	-	-	-	-	-	-	-	-	1	1
	All soils	-	-	1,085	1,085	2	32	-	16	1	-	1	-	-	14	28	4	-	5
Good	Maximum each species	-	-	-	-	-	32	-	16	1	-	1	-	-	14	28	4	-	5
	Bergi gravel	-	-	-	-	-	32	-	16	1	-	1	-	-	14	28	4	-	5
	All soils	-	-	661	661	8	1	-	-	3	8	5	1	8	72	-	-	2	-
	Maximum each species	-	-	-	-	-	1	-	-	3	8	5	1	8	72	-	-	2	-

MOUNTAIN LOAM

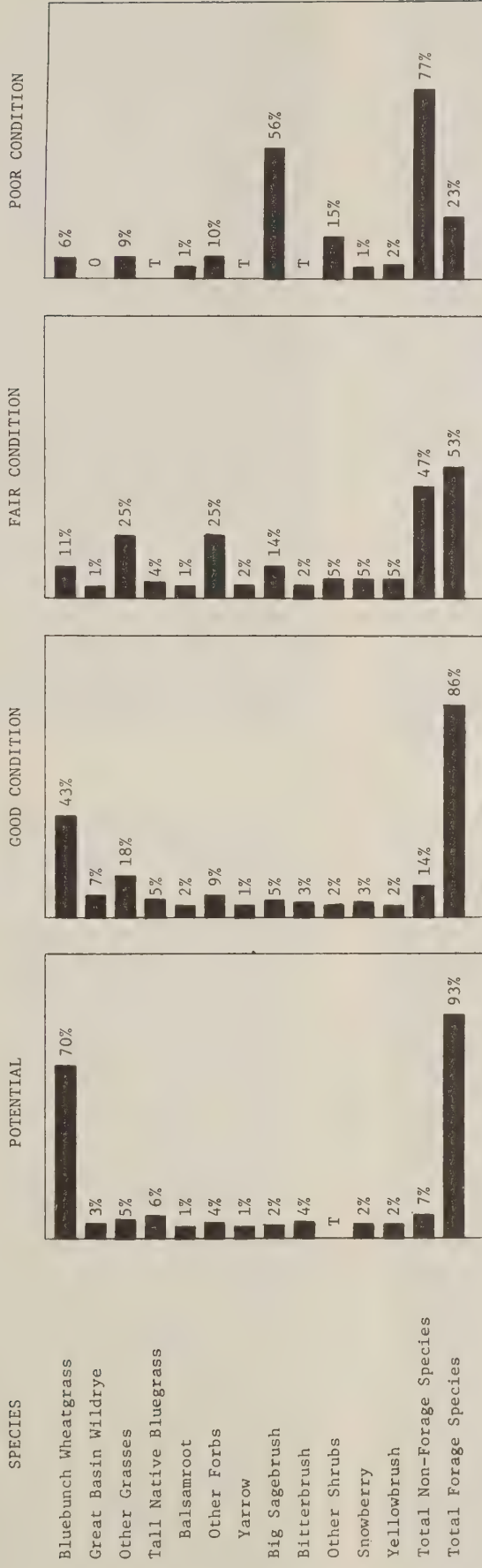
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RANGE YIELD AND COMPOSITION
MOUNTAIN LOAM continued

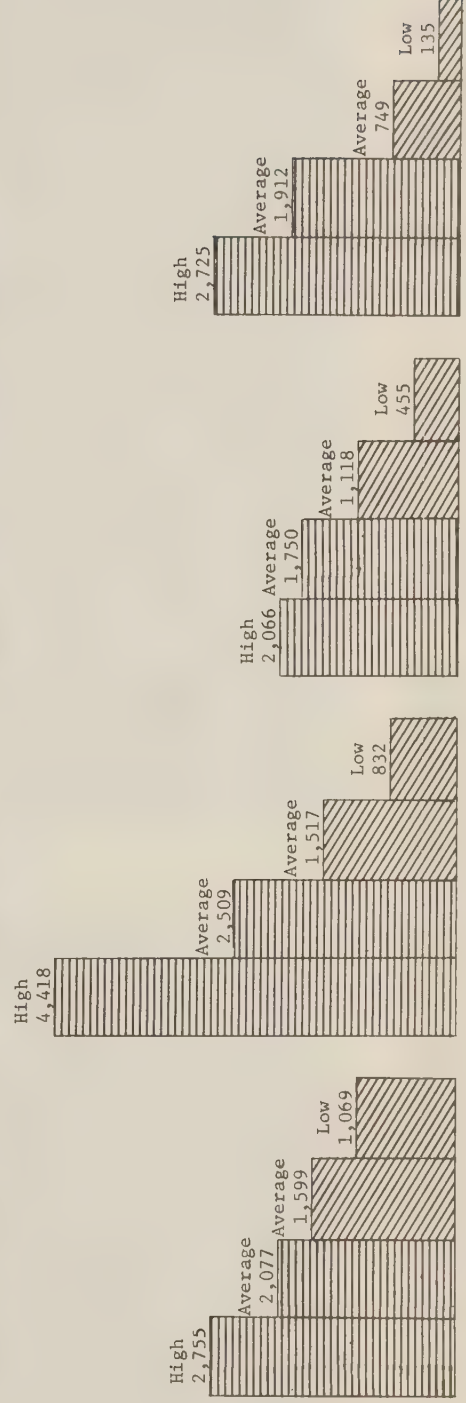
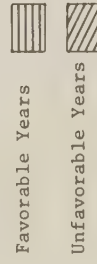
Range Condition	Soil Taxonomic Unit	Total Annual Yield				Number of Plots	Species Composition (Percent)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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		Favorable Years		Unfavorable Years			Western Wheatgrass	Tall Native Bluegr.	Dryland Sedge	Bluebunch Wheatgr.	Indian Ricegrass	Columbia Needlegr.	Cheatgrass	Spike Fescue	Sheep Fescue	Letterman Needlegr.	Squirreltail	Slender Wheatgrass	Annuals	Pussytoes	Penstemon	Tarweed	Aster	Loco	Geranium	Lupine	Yarrow	Balsamroot	Buckwheat	Little Sunflower	Herbaceous Sage	Peavine	Goldenrod	Others	Serviceberry	Buckwheat	Rubber Rabbitbrush	Oakbrush	Rock Goldenrod	Yellowbrush	Silver Sagebrush	Snowberry	Big Sagebrush	Bitterbrush	Snakeweed																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
		High	Average	Average	Low																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														

YIELD AND VEGETATION COMPOSITION

Mountain Loam Range Site



Total Annual Yield
Pounds Per Acre-Air Dry



MOUNTAIN LOAM RANGE SITE



EXCELLENT CONDITION



GOOD CONDITION



FAIR CONDITION



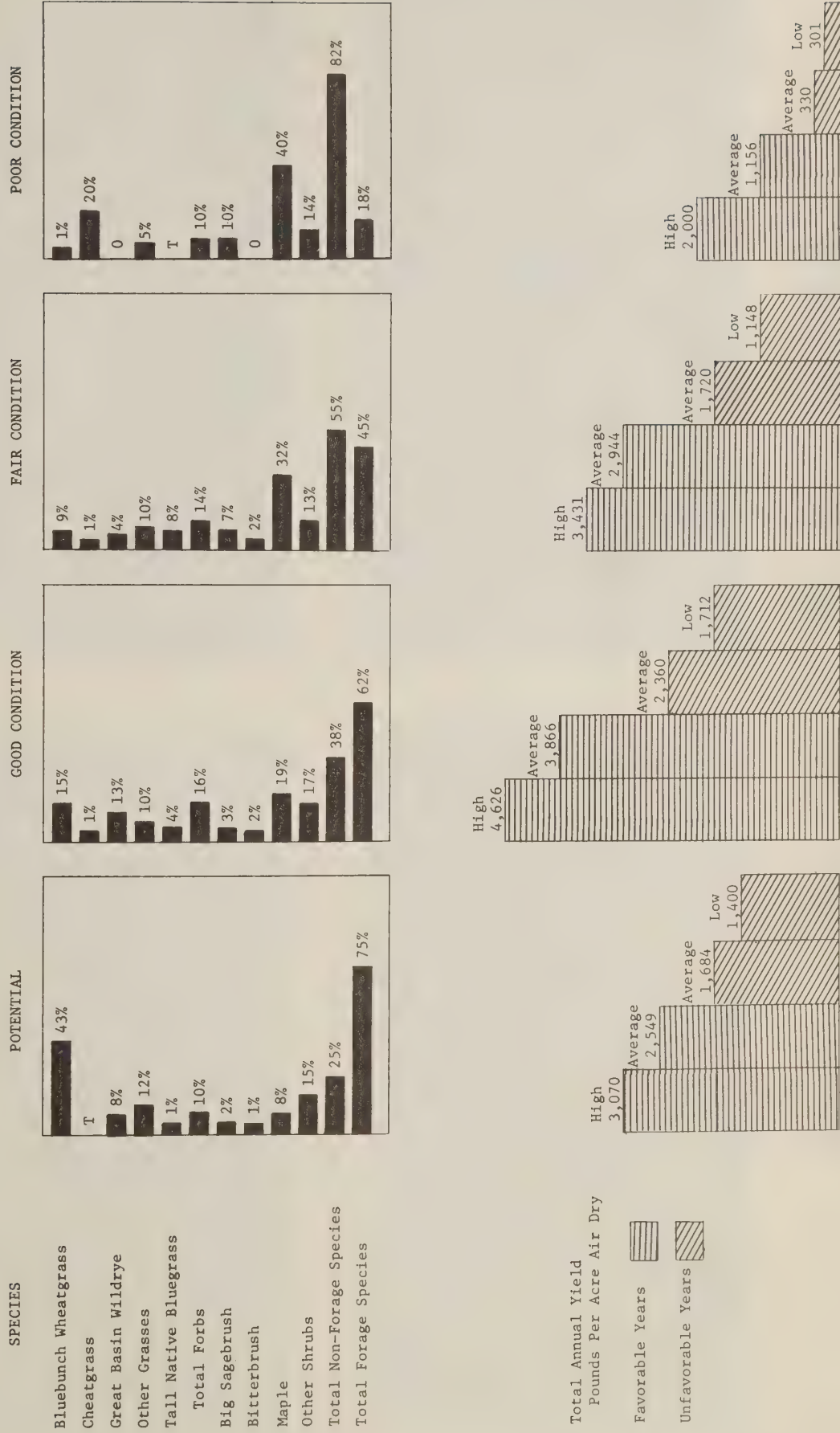
POOR CONDITION

RANGE YIELD AND COMPOSITION
MOUNTAIN LOAM (SHRUB)

Range Condition			Soil Taxonomic Unit			Total Annual Yield			Number of Plots	Species Composition (Percent)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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										Bluebunch Wheatgr.	Prairie Junegrass	Tall Native Bluegr.	Cheatgrass	Others	Great Basin Wildrye	Slender Wheatgrass	Bearded Wheatgrass	Dryland Sedge	Others	Little Sunflower	Lupine	Yarrow	Peavine	Mulesear Dock	Daisy	Stoneseed	Balsamroot	Others	Bitterbrush	Oakbrush	Serviceberry	Snowberry	Big Sagebrush	Maple	Yellowbush																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
Excellent	All soils	3,070	2,549	1,684	1,400	95	43	2	1	T	5	8	1	4	-	2	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	

YIELD AND VEGETATION COMPOSITION

Mountain Loam (Shrubs) Range Site



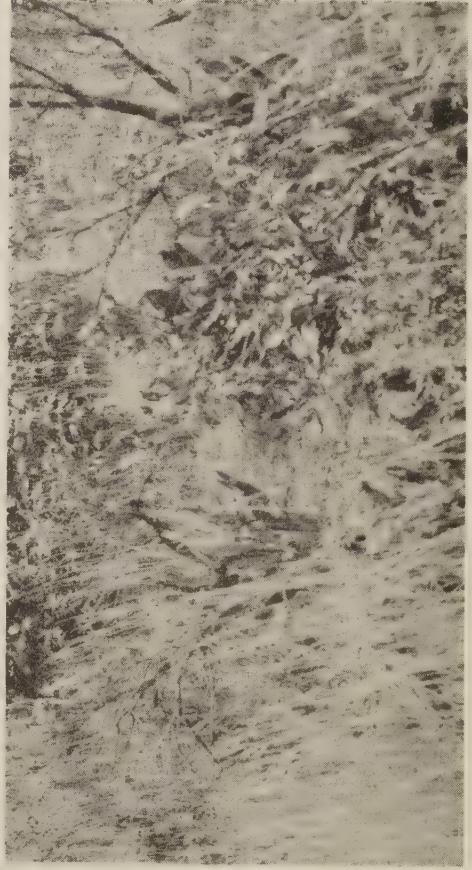
MOUNTAIN LOAM (NORTH SLOPES) RANGE SITE



EXCELLENT CONDITION



GOOD CONDITION



FAIR CONDITION



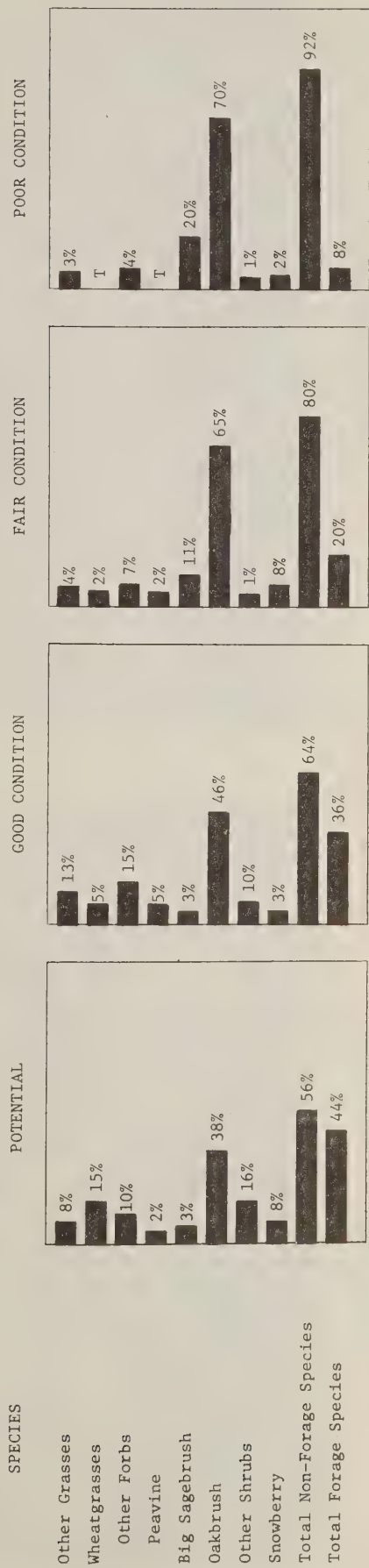
POOR CONDITION

MOUNTAIN LOAM (OAK)

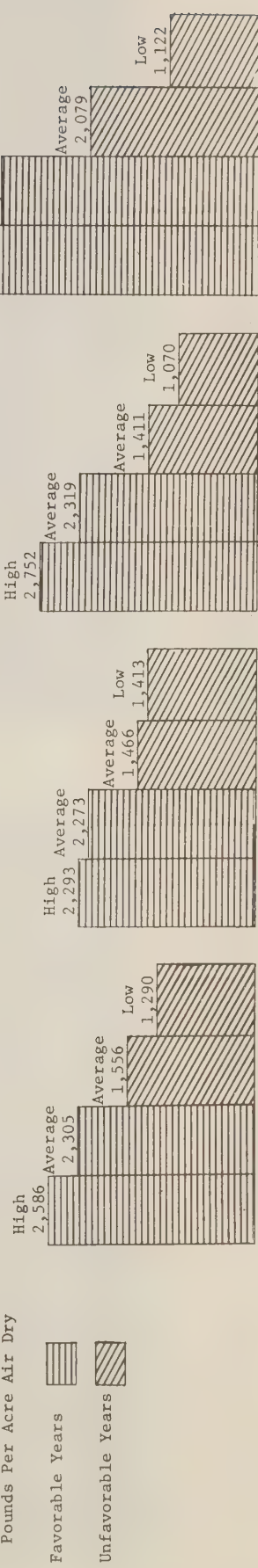
[illegible]

YIELD AND VEGETATION COMPOSITION

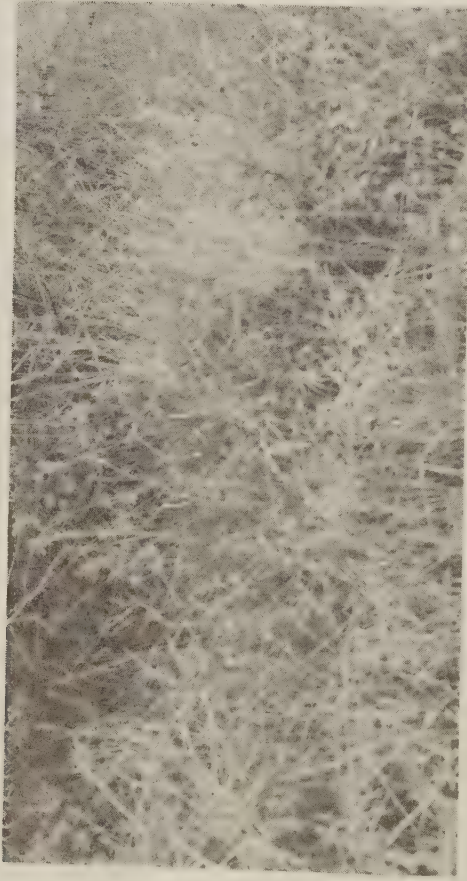
Mountain Loam (Oak) Range Site



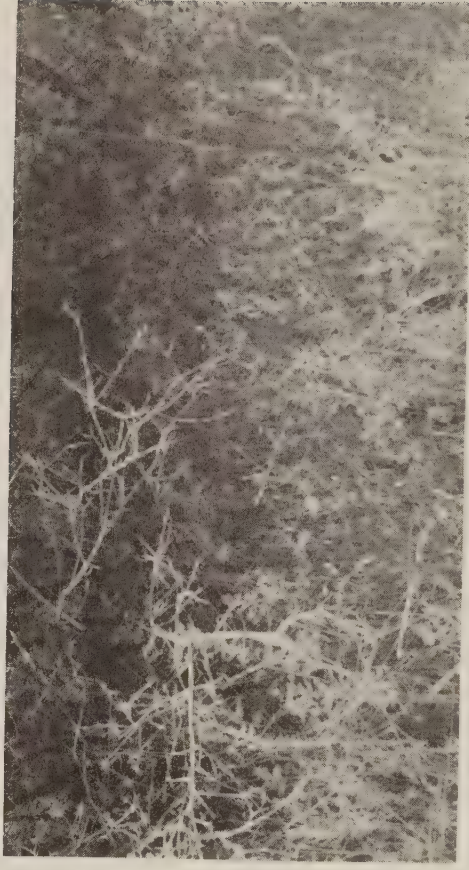
Total Annual Yield,
Pounds Per Acre Air Dry



MOUNTAIN LOAM (OAKBRUSH) RANGE SITE



EXCELLENT CONDITION



GOOD CONDITION



FAIR CONDITION



POOR CONDITION

RANGE YIELD AND COMPOSITION
MOUNTAIN LOAM (PONDEROSA PINE)

Range Condition	Soil Taxonomic Unit	Total Annual Yield				Number of Plots	Species Composition (Percent)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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		Favorable Years		Unfavorable Years			Prairie Junegrass	Western Wheatgrass	Needleandthread	Tall Native Bluegr.	Nodding Brome	Mountain Muhly	Indian Ricegrass	Dryland Sedge	Letterman Needlegr.	Squirreltail	Cheatgrass	Columbia Needlegr.	Little Sunflower	Peavine	Aplopappus	Indian Paintbrush	Drummond Thistle	Yarrow	Cryptantha	Senecio	Herbaceous Sage	Loco	Leptodactylon	Pussytoes	Penstemon	Stickseed	Others	Snakeweed	Gooseberry	Rocky Mt. Red Jun.	Serviceberry	Gambel Oak	Big Sagebrush	Yellowbrush	Bitterbrush	Ponderosa Pine																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
		High	Average	Average	Low																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										

RANGE YIELD AND COMPOSITION

MOUNTAIN LOAM (SUMMER PRECIPITATION)

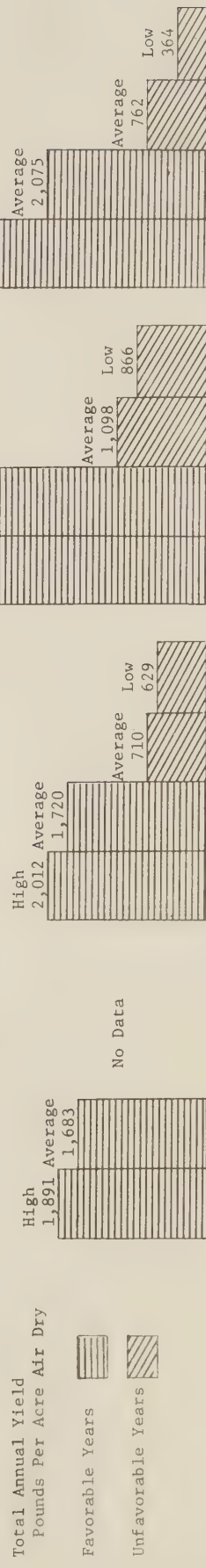
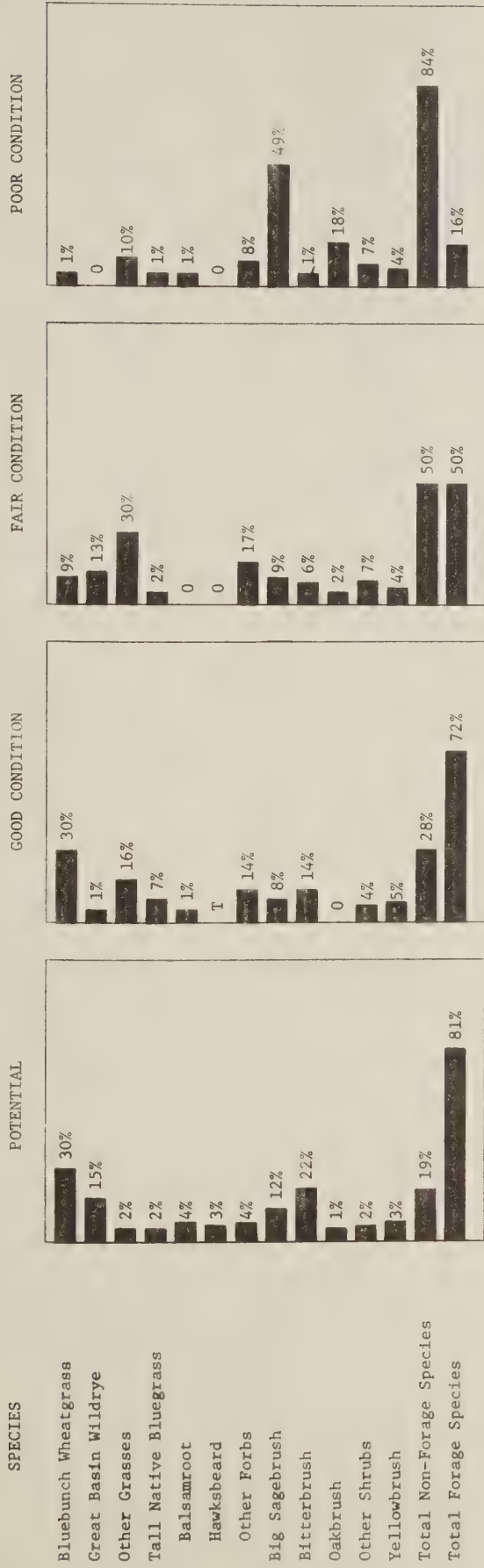
[illegible]

MOUNTAIN SHALLOW LOAM

[illegible]

YIELD AND VEGETATION COMPOSITION

Mountain Shallow Loam Range Site



RANGE YIELD AND COMPOSITION MOUNTAIN SHALLOW LOAM (CURLLEAF MAHOGANY)

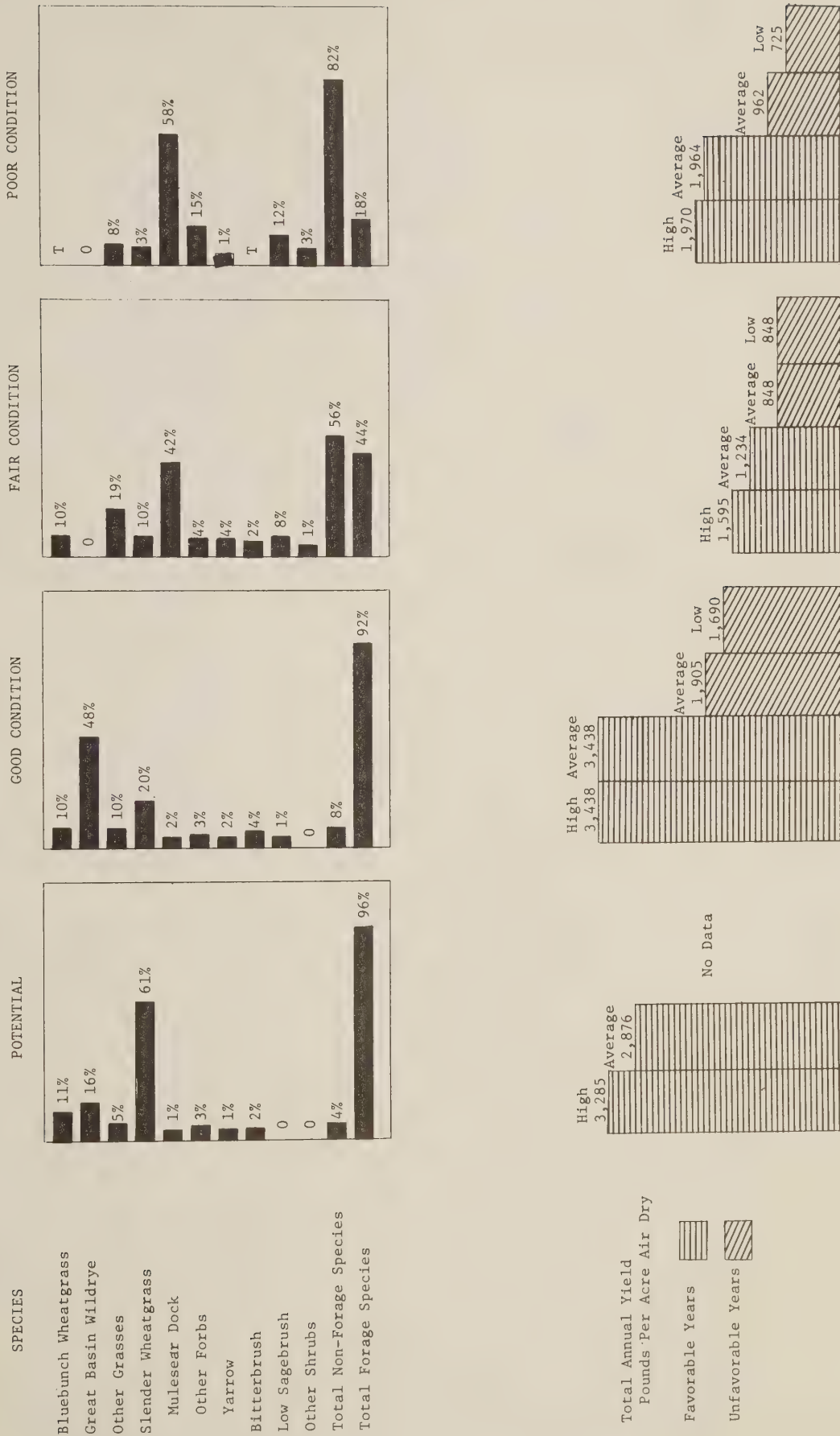
Range Condition	Soil Taxonomic Unit	Total Annual Yield			Number of Plots	Species Composition (Percent)																	
						Unfavorable Years			Favorable Years			Grasses			Forbs			Shrubs					
		High	Average	Average								Low	Bluebunch Wheatgr.	Kings Fescue	Indian Ricegrass	Hawksbeard	Yarrow	Others	Penstemon	Wild Carrot	Daisy	Balsamroot	Low Sagebrush
Excellent	Agassiz rocky sil	2,469	2,469	-	-	10	34	1	-	1	2	2	2	-	-	-	-	-	-	-	54	4	2
Good	Agassiz rocky sil	1,888	1,826	-	-	20	12	1	2	-	1	2	2	T	T	T	2	10	2	1	62	4	1
Fair	Agassiz rocky sil	1,377	1,377	-	-	10	1	-	-	-	3	1	-	-	-	1	34	4	-	1	50	-	6

MOUNTAIN STONY CLAY

[illegible]

YIELD AND VEGETATION COMPOSITION

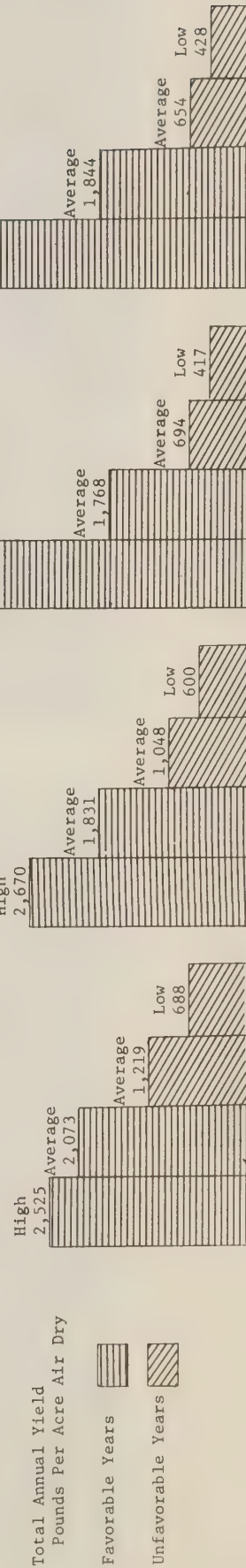
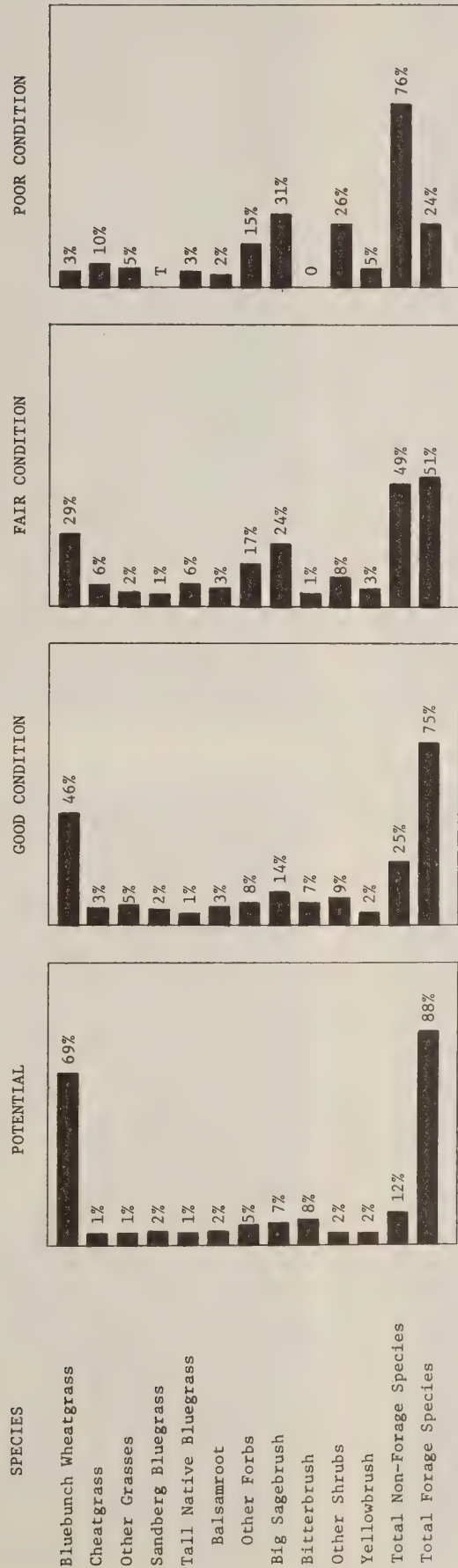
Mountain Stony Clay Range Site



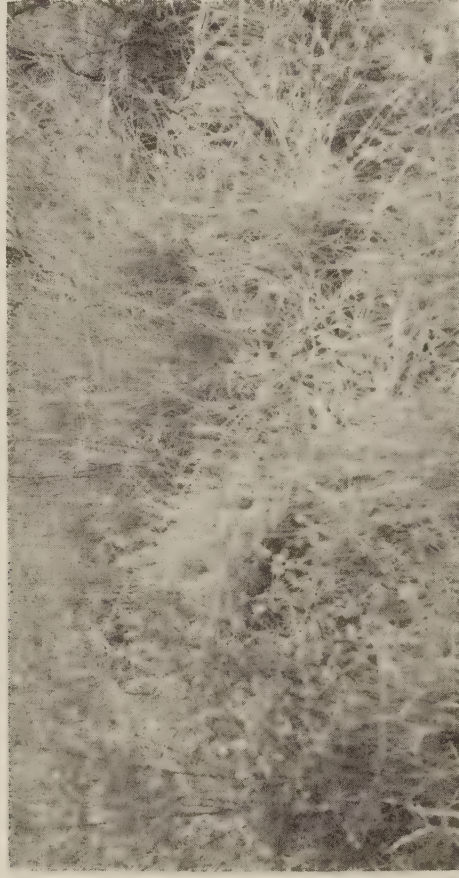
[illegible]

YIELD AND VEGETATION COMPOSITION

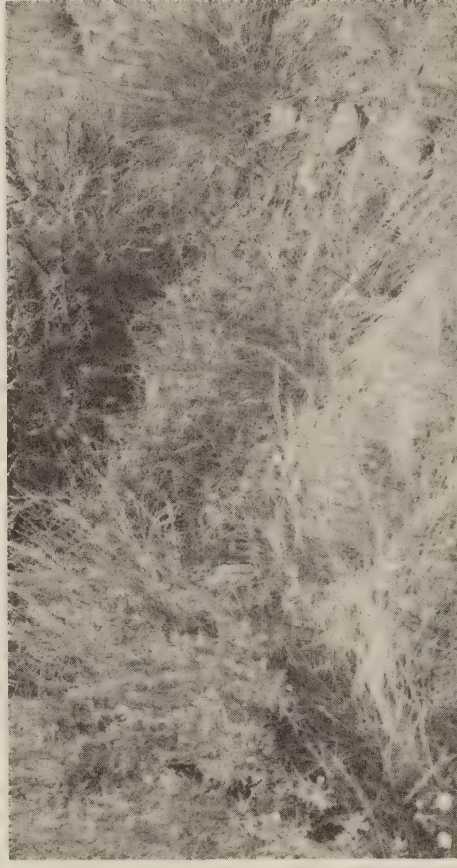
Mountain Stony Loam Range Site



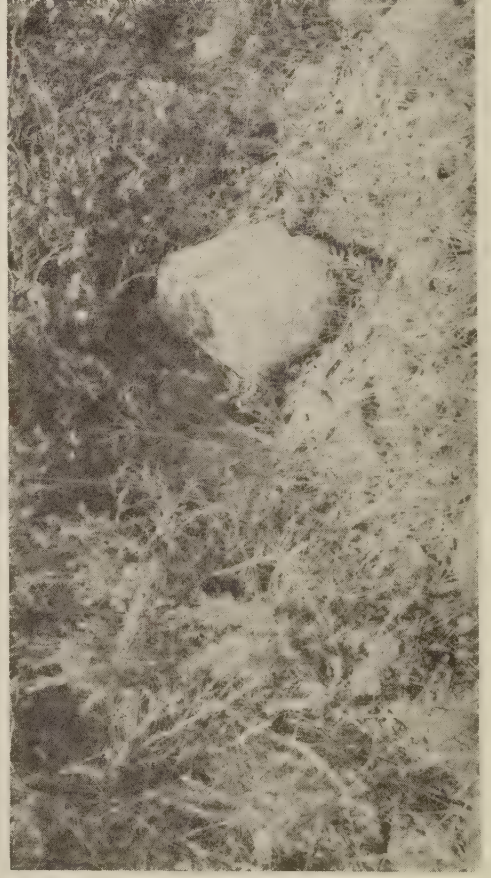
MOUNTAIN STONY LOAM RANGE SITE



EXCELLENT CONDITION



GOOD CONDITION



FAIR CONDITION



POOR CONDITION

RANGE YIELD AND COMPOSITION
MOUNTAIN STONY LOAM continued

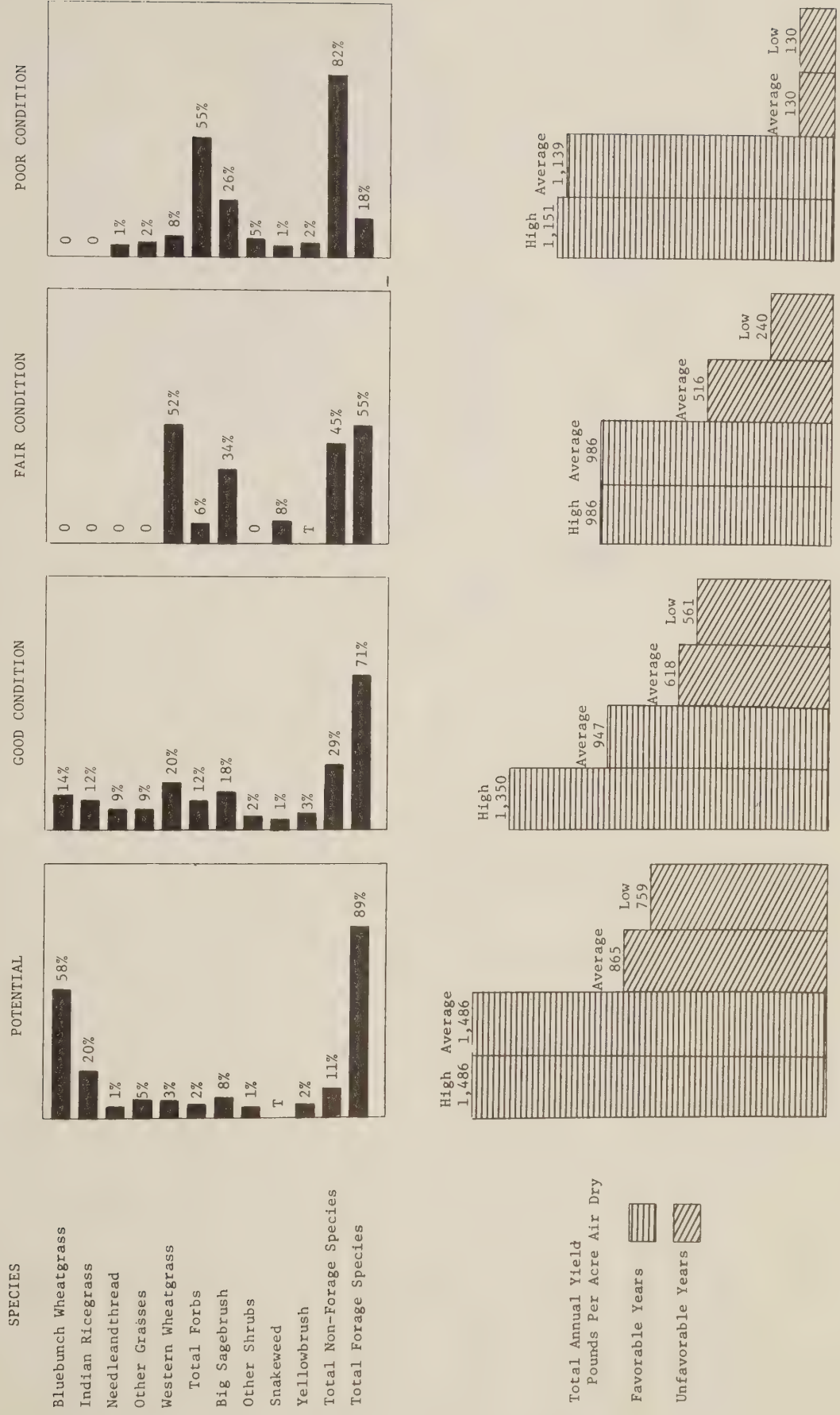
[illegible]

RANGE YIELD AND COMPOSITION
MOUNTAIN STONY LOAM (SUMMER PRECIPITATION)

Range Condition	Soil Taxonomic Unit	Total Annual Yield				Number of Plots	Species Composition (Percent)																														
							Grasses														Forbs										Shrubs						
		Favorable Years		Unfavorable Years			Indian Ricegrass	Squirreltail	Prairie Junegrass	Nevada Bluegrass	Dryland Sedge	Needleandthread	Mountain Brome	Western Wheatgrass	Blue Grama	Nodding Brome	Sandberg Bluegrass	Kentucky Bluegrass	Daisy	Toadflax	Loco	Lupine	Flax	Penstemon	Indian Paintbrush	Buckwheat	Scarlet Gilia	Vetch	Pussytoes	Yarrow	Oakbrush	Horsebrush	Yellowbrush	Snowberry	Buckwheat	Bitterbrush	Big Sagebrush
		High	Average	Average	Low																																
Excellent		-	-	1,202	1,202	10	1	1	2	16	2	1	27	4	-	-	-	-	1	2	1	2	2	-	-	-	-	-	-	-	-	8	4	1	18	7	
Good		-	-	912	912	10	-	1	7	10	10	3	-	16	T	1	5	-	-	2	-	-	-	6	1	2	1	4	3	-	3	3	1	-	-	16	5
Fair		-	-	799	799	10	-	3	2	8	-	1	-	-	-	4	T	5	-	1	-	-	T	2	4	-	T	6	5	4	2	3	-	6	-	8	36

YIELD AND VEGETATION COMPOSITION

Upland Clay Range Site



UPLAND CLAY (SUMMER PRECIPITATION)

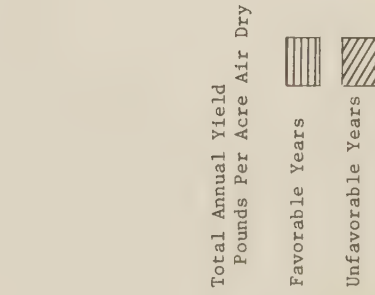
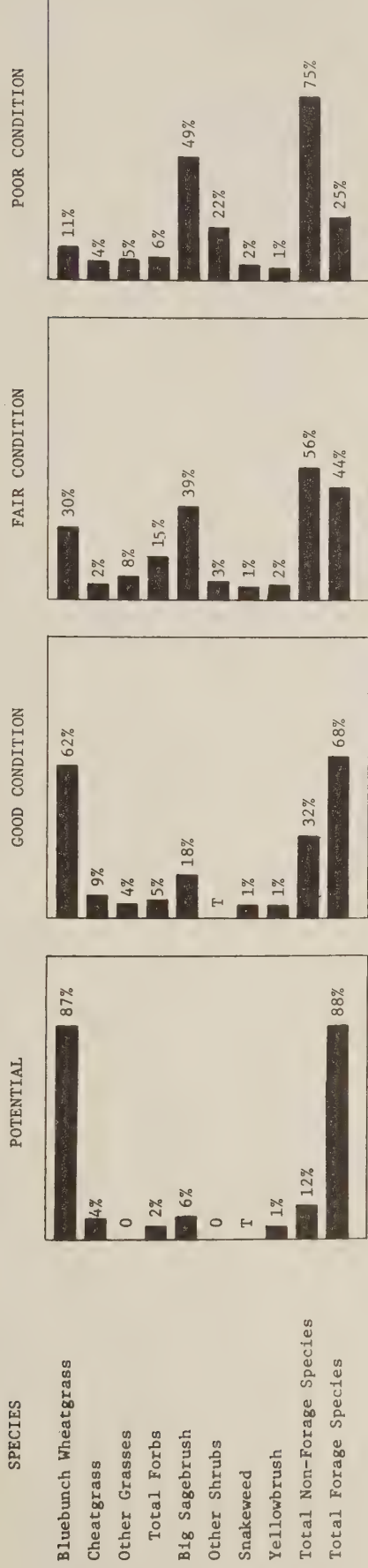
Good

UPLAND GRAVELLY LOAM

[illegible]

YIELD AND VEGETATION COMPOSITION

Upland Gravelly Loam Range Site



RANGE YIELD AND COMPOSITION

UPLAND LIMY LOAM

Range Condition	Soil Taxonomic Unit	Total Annual Yield			Number of Plots	Species Composition (Percent)																						
						Grasses					Forbs					Shrubs												
		Favorable Years		Unfavorable Years		Bluebunch Wheatgr.	Cheatgrass	Sandberg Bluegrass	Indian Ricegrass	Needleandthread	Squirreltail	Phlox	Moss	Annals	Penstemon	Peavine	Flax	Aster	Sego Lily	Toadflax	Mormontea	Big Sagebrush	Phlox	Snakeweed	Rock Goldenrod	Bitterbrush	Yellowbrush	
		High	Average	Average		Low																						
Excellent	All soils	947	947	-	-	30	74	10	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		913	863	-	-	20	38	4	-	4	-	-	-	-	-	-	-	-	-	-	-	-	16	7	10	16	-	
Good	Maximum each species	-	-	-	-	-	56	6	-	6	-	-	-	-	-	-	-	-	-	-	-	-	26	13	20	32	1	
		913	863	-	-	20	38	4	-	4	-	-	-	-	-	-	-	-	-	-	-	16	7	10	16	-		
Fair	Pharo stfsl	760	760	433	433	12	17	58	-	8	9	-	-	-	-	-	-	-	-	5	6	2	-	-	-	-	-	
		-	-	-	-	-	20	65	-	20	59	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	
Poor	All soils	1,685	1,430	425	155	43	2	T	T	4	T	1	2	-	-	-	-	-	-	-	9	73	-	-	-	-	-	
		-	-	-	-	-	8	T	T	18	T	4	10	-	-	-	-	-	-	-	38	97	-	1	-	29	3	
	Phage	1,685	1,430	651	611	33	2	T	T	-	T	2	-	-	-	-	-	-	-	-	-	94	-	-	-	-	-	
		-	-	155	155	10	-	-	-	18	-	-	-	10	-	-	-	-	-	-	38	1	-	1	-	29	3	
	Arapien loam	-	-				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

RANGE YIELD AND COMPOSITION
UPLAND LIMY LOAM (JUNIPER-PINON)

Range Condition	Soil Taxonomic Unit	Total Annual Yield				Number of Plots	Species Composition (Percent)																									
							Grasses								Forbs				Shrubs													
		Favorable Years		Unfavorable Years			High	Average	Average	Low	Indian Ricegrass	Cheatgrass	Squirreltail	Needleandthread	Bluebunch Wheatgr.	Western Wheatgrass	Sandberg Bluegrass	Tall Native Bluegr.	Phlox	Annals	Globemallow	Annals	Loco	Rock Goldenrod	Black Sagebrush	Winterfat	Phlox	Yellowbrush	Juniper	Pinon Pine	Snakeweed	Big Sagebrush
Excellent	Brass sicl	-	-	786	786	10	14	1	1	4	38	-	-	-	-	-	-	3	1	1	-	-	-	-	-	-	-	29	-	3	2	
Good	All soils	1,420	1,420	670	507	30	23	2	3	4	4	2	-	-	-	-	-	-	-	-	-	2	-	-	-	1	2	1	50	3	T	
	Maximum each species	-	-	-	-	-	28	4	5	7	7	5	-	-	-	-	-	-	-	-	5	-	-	-	-	1	7	1	55	10	1	
Poor	Brass sicl	1,420	1,420	507	507	20	25	2	3	4	6	2	-	-	-	-	-	-	-	-	4	-	-	-	-	1	4	T	48	-	T	
		1,237	1,237	-	-	10	1	-	T	-	-	-	-	T	-	-	-	-	-	-	-	-	1	T	3	-	2	1	70	-	2	

UPLAND LOAM

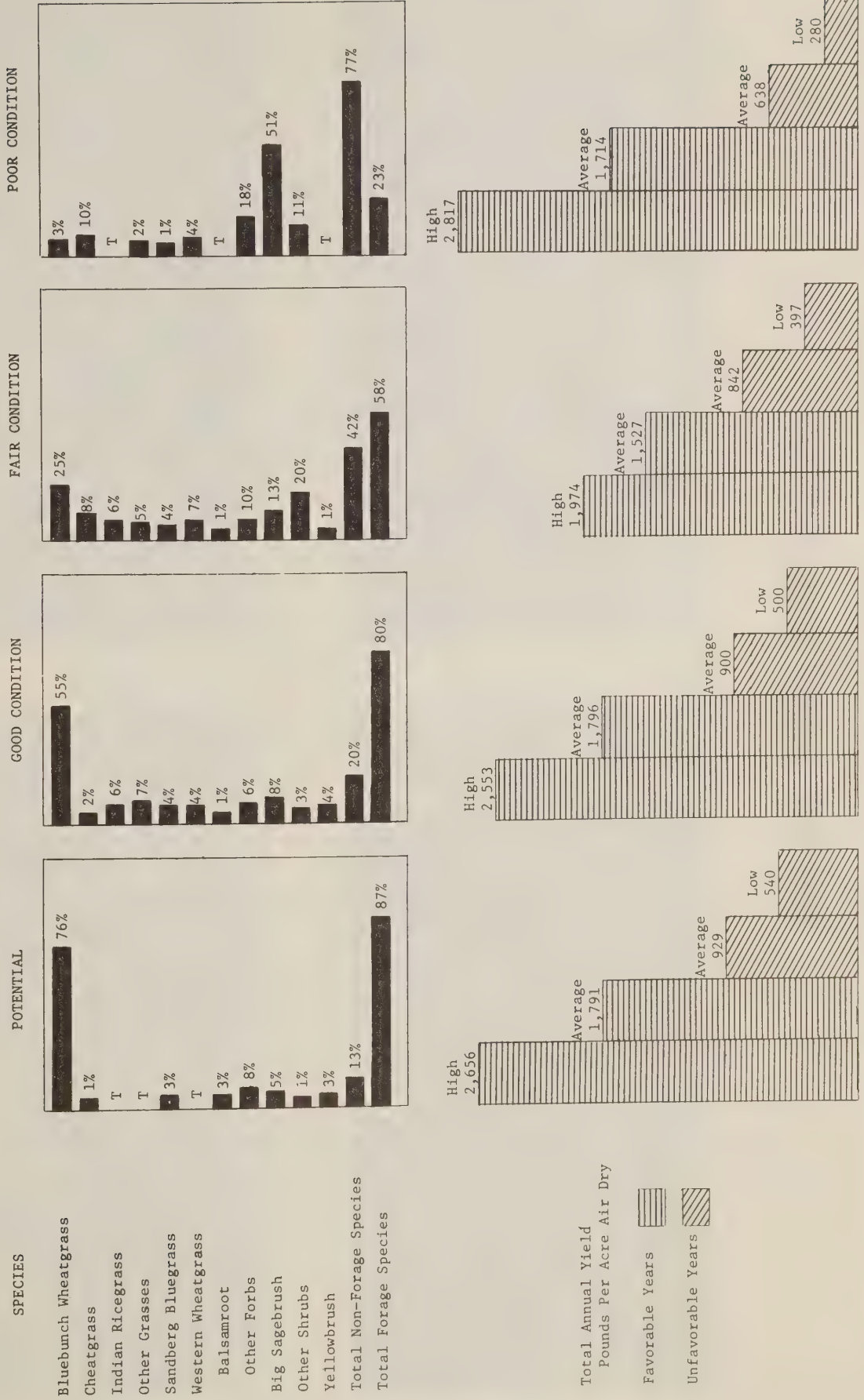
[illegible]

UPLAND LOAM continued

[illegible]

YIELD AND VEGETATION COMPOSITION

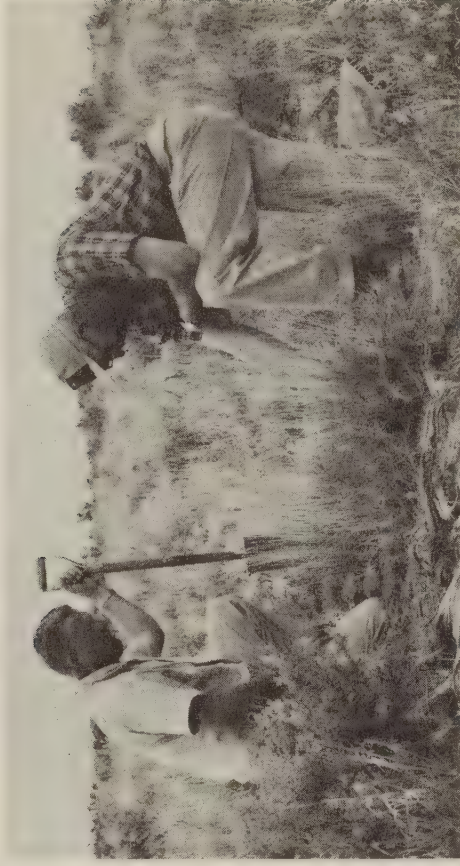
Upland Loam Range Site



UPLAND LOAM RANGE SITE



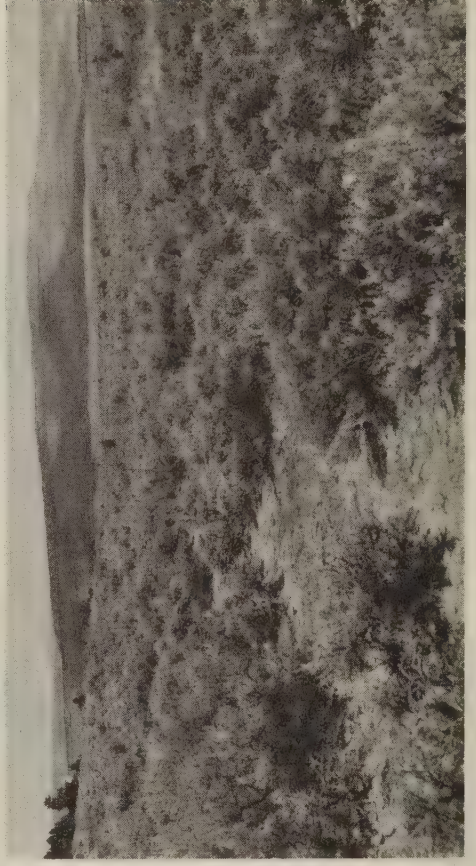
EXCELLENT CONDITION



GOOD CONDITION



FAIR CONDITION



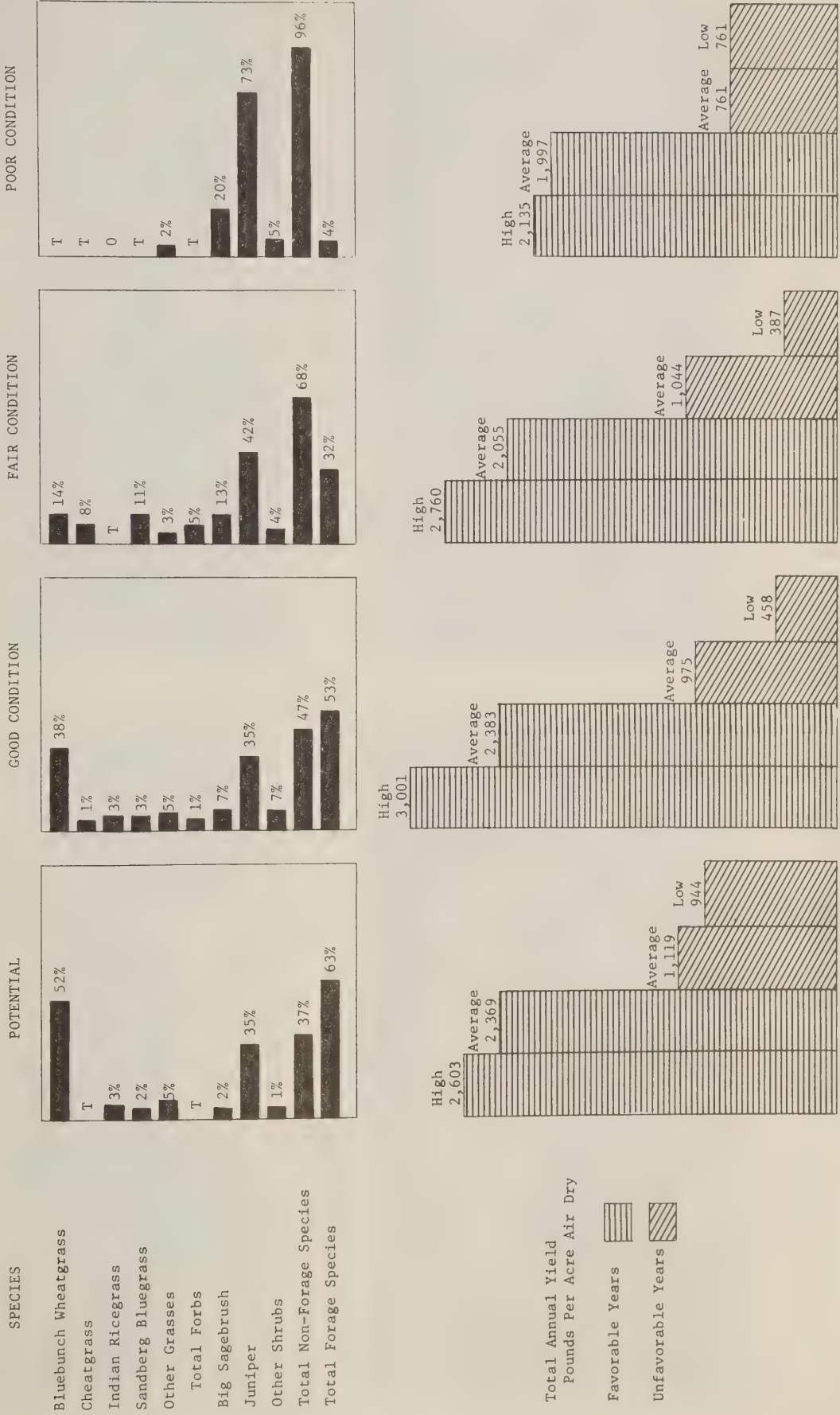
POOR CONDITION

UPLAND LOAM (JUNIPER)

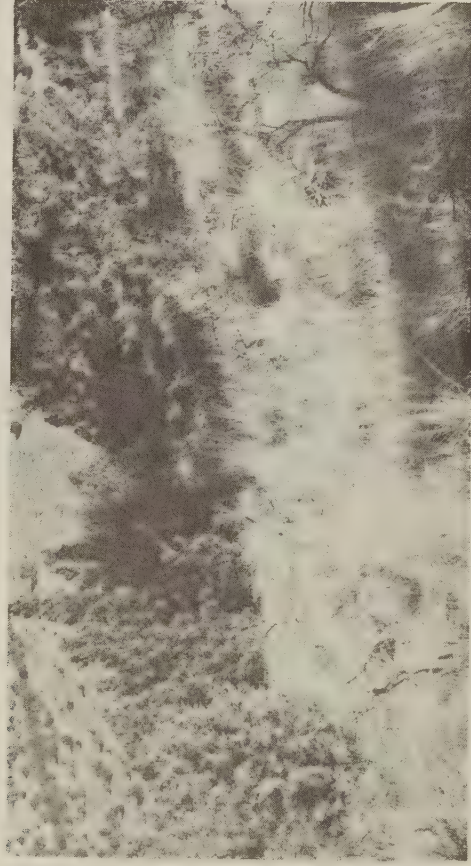
Range Condition	Soil Taxonomic Unit	Total Annual Yield			Number of Plots	Species Composition (Percent)																																
						Grasses								Forbs								Shrubs																
		Favorable Years		Unfavorable Years		Indian Ricegrass	Cheatgrass	Squirreltail	Needleandthread	Bluebunch Wheatgr.	Sandberg Bluegrass	Western Wheatgrass	Great Basin Wildrye	Tall Native Bluegr.	Phlox	Annals	Balsamroot	Others	Daisy	Buckwheat	Butterweed	Penstemon	Onion	Loco	Goldenrod	Lupine	Senecio	Leptodactylon	Buckwheat	Black Sagebrush	Pinon Pine	Bitterbrush	Snakeweed	Phlox	Juniper	Yellowbrush	Big Sagebrush	
		High	Average	Average																																		Low
Excellent	All soils	2,603	2,369	1,119	944	50	3	T	1	1	49	2	2	1	-	T	T	T	T	T	T	-	-	-	-	-	-	-	-	-	-	-	-	-	35	1	2	
	Maximum each species	-	-	-	-	-	13	1	3	370	5	8	5	-	1	T	1	T	T	T	T	-	-	-	-	-	-	-	-	-	-	-	-	-	51	4	6	
	Broad cobl	2,603	2,429	-	-	20	-	-	-	58	4	-	-	-	-	T	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	35	-	3		
	Kearns sil	2,252	2,252	1,294	1,294	20	-	T	-	58	T	-	-	-	-	T	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40	-	-		
	All soils	3,001	2,383	975	458	94	3	1	-	T	39	3	3	-	2	T	T	T	1	T	-	T	T	T	T	T	-	-	-	-	1	1	2	1	32	1	7	
Good	Maximum each species	-	-	-	-	-	13	3	-	171	13	18	-	12	2	1	1	3	2	-	1	1	1	1	1	-	-	-	-	-	8	5	12	4	11	58	7	23
	Deer Creek cobl	-	-	959	959	10	-	1	-	50	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	6	4	-	16	-	16	
	Broad cobl	2,858	2,312	1,402	1,402	30	-	-	-	56	2	-	-	-	-	T	-	1	T	-	T	-	1	-	-	-	-	-	-	-	-	-	-	38	T	T		
	Kearns sil	3,001	3,001	-	-	10	-	3	-	38	13	-	-	-	-	-	-	-	1	-	-	-	-	1	1	-	-	-	-	-	-	-	-	38	-	5		
	Borvant cobl	2,043	2,043	-	-	10	T	T	-	1	5	T	-	-	-	-	T	-	T	2	-	-	-	-	-	1	-	-	-	-	2	12	1	T	58	T	13	
Fair	Calita loam	-	-	1,020	1,020	10	-	-	-	28	1	6	-	12	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	4	-	35	2	5	
	All soils	2,760	2,055	1,044	387	60	T	8	1	-	14	11	-	3	2	T	1	1	-	-	T	T	T	T	-	1	-	-	-	-	-	-	4	-	39	-	13	
	Maximum each species	-	-	-	-	-	1	31	4	-	33	22	-	-	10	5	T	3	3	-	-	2	1	1	-	3	-	-	-	-	-	-	22	-	70	-	33	
	Kearns sil	2,760	2,286	1,396	1,396	30	T	16	1	-	7	12	-	-	1	1	-	T	6	-	T	-	T	T	-	-	-	-	-	-	-	-	1	-	43	-	12	
	Broad cobl	1,593	1,593	1,350	1,350	20	-	-	-	-	30	14	-	-	3	1	-	2	3	-	-	1	T	-	2	-	2	-	-	-	-	-	-	-	34	-	4	
Poor	Ushar loam	-	-	387	387	10	-	1	3	-	T	1	-	-	1	5	T	-	T	-	-	-	-	-	-	-	-	-	-	-	-	20	-	36	-	33		
	All soils	2,135	1,997	761	761	31	-	T	2	-	T	T	-	-	T	T	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	171	T	20		
	Maximum each species	-	-	-	-	-	-	1	4	-	1	1	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	2	92	1	61
	Tushar loam	2,135	1,997	761	761	31	-	T	2	-	T	T	-	-	T	T	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	171	T	20	
							-																															

YIELD AND VEGETATION COMPOSITION

Upland Loam (Juniper) Grazable Woodland Site



DEEP LOAM (PINON - JUNIPER) 12" - 16" p.z.



EXCELLENT CONDITION



FAIR CONDITION



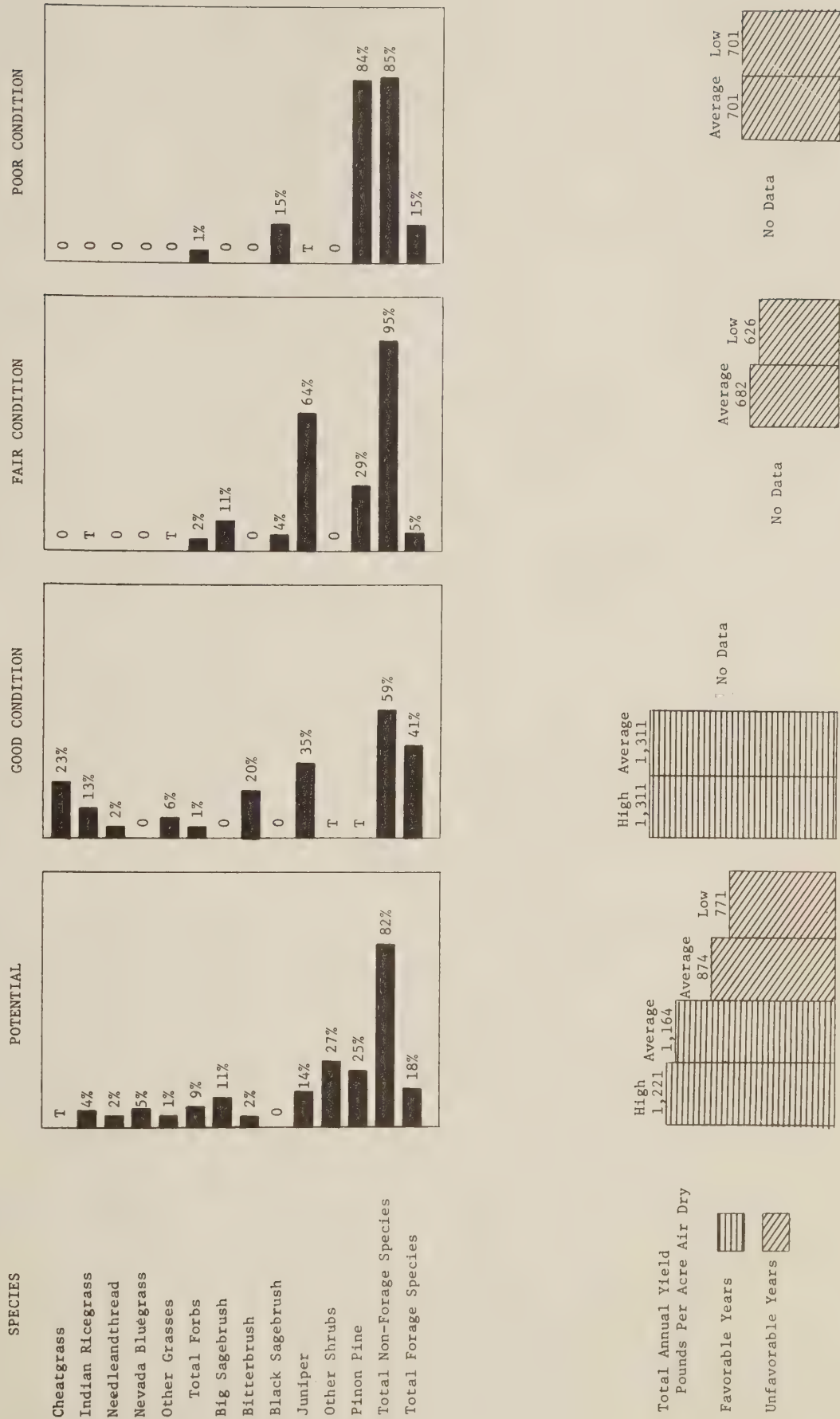
GOOD CONDITION



POOR CONDITION

YIELD AND VEGETATION COMPOSITION

Upland Sand (Juniper-Pinon) Grazable Woodland Site

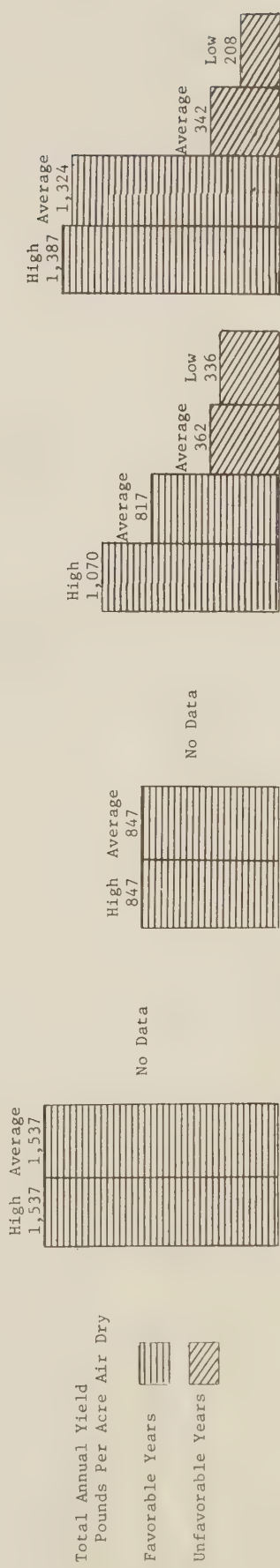
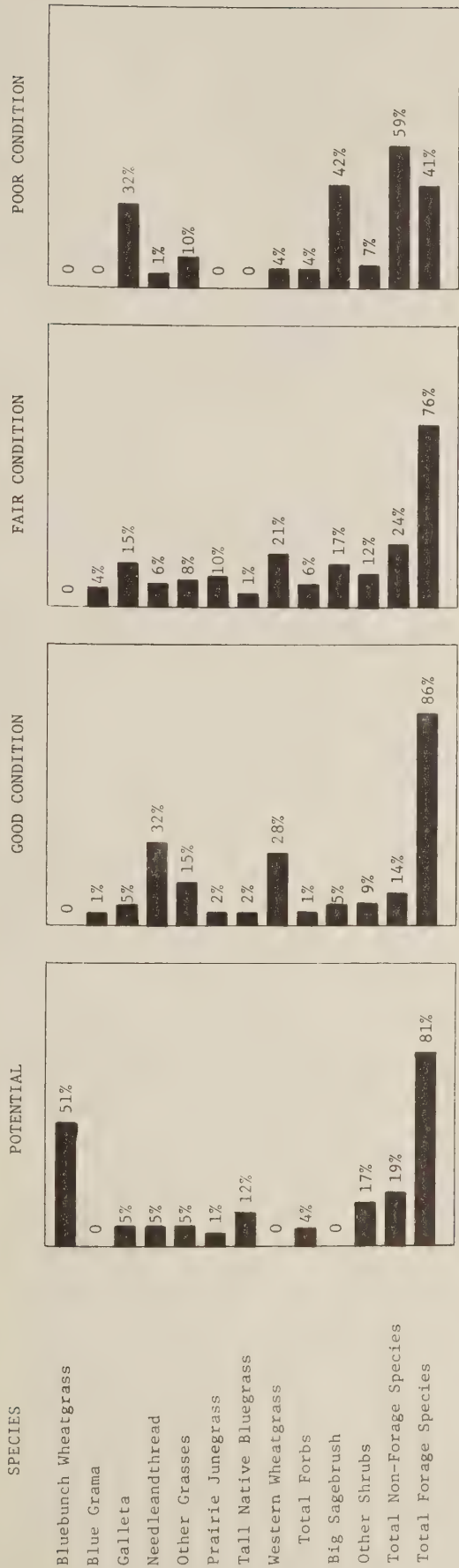


UPLAND LOAM (SUMMER PRECIPITATION)

Range Condition	Soil Taxonomic Unit	Total Annual Yield				Number of Plots	Species Composition (Percent)																														
							Grasses														Forbs						Shrubs										
		Favorable Years		Unfavorable Years			Galletta	Tall Native Bluegr.	Bluebunch Wheatgr.	Needleandthread	Prairie Junegrass	Sandberg Bluegrass	Bullgrass	Indian Ricegrass	Western Wheatgrass	Squirreltail	Blue Grama	Sand Droseed	Cheatgrass	Threawn	Peavine	Hawksbeard	Mustard	Annals	Skeleton Loco	Globemallow	Others	Mormontea	Phlox	Snakeweed	Winterfat	Rubber Rabbitbrush	Big Sagebrush	Bitterbrush	Oakbrush	Pricklypear	Yellowbrush
		High	Average	Average	Low			5	12	51	5	1	1	4	-	-	-	-	-	-	-	1	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Excellent	All soils	1,537	1,537	-	-	21	5	12	51	5	1	1	4	-	-	-	-	-	-	1	2	1	-	-	-	-	-	-	-	-	-	-	-	2	5	10	
	Max. each species	-	-	-	-	-	100	13	54	5	1	1	4	-	-	-	-	-	1	2	1	-	-	-	-	-	-	-	-	-	-	-	-	2	5	10	
Good	All soils	847	847	-	-	20	-	2	-	32	2	-	-	8	28	12	1	-	-	-	-	-	T	1	T	-	-	-	-	-	-	-	2	5	1	-	2
	Max. each species	-	-	-	-	-	-	3	-	33	4	-	-	15	42	25	2	-	-	-	-	-	1	2	1	-	T	-	-	-	-	-	3	10	2	-	5
Fair	All soils	1,070	817	362	336	31	15	1	-	6	10	3	-	-	21	-	4	4	-	-	-	-	-	-	-	T	6	-	5	T	6	-	17	1	-	-	
	Max. each species	-	-	-	-	-	61	2	-	11	31	10	-	-	37	-	32	35	-	-	-	-	-	-	1	29	-	14	2	19	-	26	9	-	-	-	
Poor	All soils	1,387	1,324	342	208	41	31	-	-	1	-	-	-	1	4	1	-	1	1	6	T	-	1	T	-	T	3	3	-	T	-	41	1	1	1	1	
	Max. each species	-	-	-	-	-	63	-	-	2	-	-	-	2	8	2	-	1	3	23	1	-	2	T	-	1	2	13	-	1	-	66	6	4	3	4	

YIELD AND VEGETATION COMPOSITION

Upland Loam (Summer Precipitation) Range Site



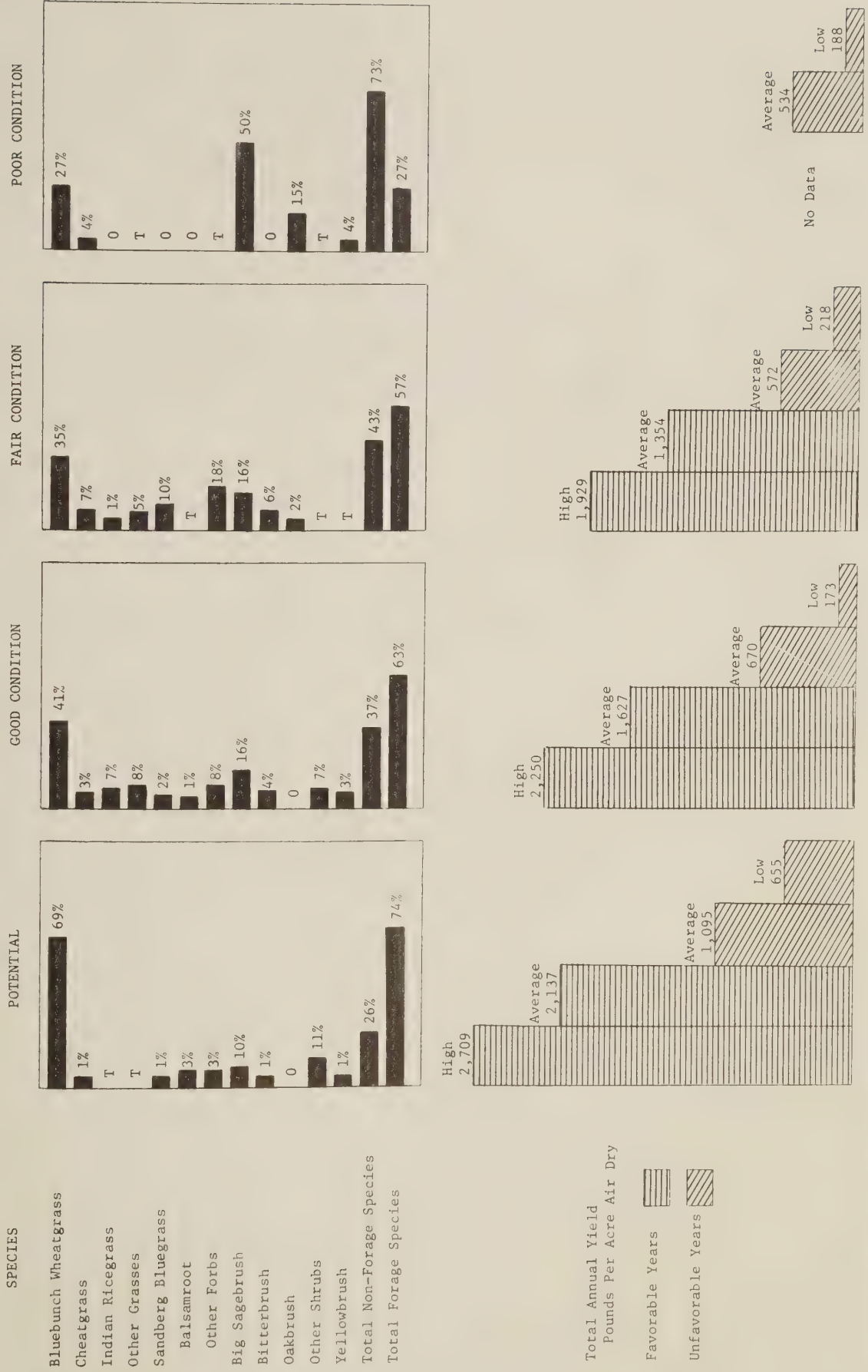
RANGE YIELD AND COMPOSITION
UPLAND SAND (SUMMER PRECIPITATION)

Range Condition	Soil Taxonomic Unit	Total Annual Yield			Number of Plots	Species Composition (Percent)																									
						Grasses				Forbs						Shrubs															
		Favorable Years	Unfavorable Years				Indian Ricegrass	Galleta	Sand Dropped	Spike Dropped	Black Grama	Threawn	Cheatgrass	Needleandthread	Indianwheat	Loco	Globemallow	Russian Thistle	Mustard	Stickseed	Phlox	Annals	Sedum	Daisy	Whorled Milkweed	Sand Sagebrush	Pricklypear	Fourwing Saltbush	Snakeweed	Winterfat	Mormon tea
Good	All soils	-	-	742	742	20	21	4	10	22	3	1	1	-	1	T	T	6	T	2	T	T	5	-	-	-	-	14	T	5	4
	Maximum each species	-	-	-	-	-	42	7	13	42	6	2	2	-	2	T	1	8	T	4	T	1	10	-	-	-	-	27	T	10	9
Fair	All soils	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Maximum each species	-	-	1,055	1,055	10	1	-	10	7	-	32	3	1	-	-	1	2	-	-	-	-	2	1	1	1	3	2	3	31	-

[illegible]

YIELD AND VEGETATION COMPOSITION

Upland Shallow Loam Range Site



RANGE YIELD AND COMPOSITION
UPLAND SHALLOW HARDPAN (JUNIPER)

Range Condition	Soil Taxonomic Unit	Total Annual Yield				Number of Plots	Species Composition (Percent)																																
							Grasses								Forbs										Shrubs														
		Favorable Years		Unfavorable Years			Indian Ricegrass	Bluebunch Wheatgr.	Needleandthread	Cheatgrass	Sandberg Bluegrass	Squirreltail	Letterman Needlegr.	Western Wheatgrass	Phlox	Mustard	Buckwheat	Loco	Gilia	Leptodactylon	Annuals	Hawksbeard	Goldenrod	Daisy	Others	Mormontea	Big Sagebrush	Buckwheat	Rock Goldenrod	Yellowbrush	Shadscale	Phlox	Pricklypear	Pinon Pine	Juniper	Snakeweed	Rubber Rabbitbrush	Black Sagebrush	Bitterbrush
		High	Average	Average	Low																																		
Good	All soils	2,426	1,881	914	749	60	6	7	2	2	T	T	T	-	T	T	T	T	T	T	T	T	9	T	2	T	T	T	T	1	1	12	46	1	2	7	2		
	Maximum each species	-	-	-	-	-	21	14	7	9	2	1	2	-	2	1	1	1	1	1	1	T	1	2	10	1	13	2	3	2	1	8	8	32	71	3	5	29	12
	Pavant loam	2,426	2,426	-	-	10	7	8	7	9	-	-	-	-	2	1	1	1	1	-	-	-	T	-	-	-	-	-	-	-	-	-	-	53	2	4	2	2	
	Borvant cobl	2,043	1,610	749	749	30	8	4	2	T	T	T	-	-	-	-	T	T	T	T	-	T	T	1	10	T	4	1	-	T	T	T	-	16	43	2	2	3	4
Poor	All soils	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Maximum each species	-	-	-	-	-	1	1	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	2	-	-	-	7	-	-	5	3	96	-	-	7	-		
	Pavant cobl	2,427	1,857	-	-	20	T	T	-	-	-	-	-	T	T	-	-	-	-	-	-	-	-	1	-	-	-	4	-	-	2	2	85	-	-	4	-		

RANGE YIELD AND COMPOSITION
UPLAND SHALLOW SHALE (PINON-JUNIPER)

Range Condition	Soil Taxonomic Unit	Total Annual Yield				Number of Plots	Species Composition (Percent)																															
							Grasses								Forbs										Shrubs													
		Favorable Years		Unfavorable Years			Bluebunch Wheatgr.	Tall Native Bluegr.	Western Wheatgrass	Indian Ricegrass	Sandberg Bluegrass	Cheatgrass	Squirreltail	Needleandthread	Sandwort	Mt. Dandelion	Poison Vetch	Globemallow	Loco	Buckwheat	Herbaceous Sage	Others	Pussytoes	Stickseed	Arenaria	Skeleton Loco	Oregon Grape	Oakbrush	Birchleaf Mahogany	Snowberry	Yellowbrush	Horsebrush	Pinon Pine	Pricklypear	Rubber Rabbitbrush	Juniper	Phlox	Buckwheat
		High	Average	Average	Low																																	
Excellent	All soils	2,632	1,791	-	-	40	13	T	T	6	T	-	-	-	1	T	1	T	T	T	-	-	-	-	-	-	-	-	-	1	T	2	T	T	66	2	1	
	Maximum each species	-	-	-	-	-	16	2	1	16	T	-	-	-	2	1	4	1	2	2	1	-	-	-	-	-	-	-	-	4	1	9	1	1	75	4	5	
	Atepic shaly c1	1,824	1,510	-	-	30	15	1	T	2	T	-	-	-	1	T	1	T	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	T	73	2	2	
	Menefee c1	2,632	2,632	-	-	10	7	-	-	16	-	-	-	-	-	-	-	2	2	1	10	-	-	-	-	-	-	-	-	4	1	9	1	-	47	-	-	
Good	All soils	2,614	2,199	1,149	840	104	19	1	T	4	T	1	T	T	T	-	T	T	T	-	-	8	1	-	-	-	-	-	2	2	4	T	3	-	T	52	3	T
	Maximum each species	-	-	-	-	-	34	3	1	17	2	3	3	1	2	-	4	1	1	-	-	10	4	-	-	-	-	23	17	14	2	20	-	5	71	8	4	
	Atepic shaly c1	2,500	2,500	1,149	840	84	18	1	T	5	T	1	T	T	T	-	T	T	1	-	-	5	1	-	-	-	-	-	4	-	-	-	-	-	60	4	T	
	Menefee c1	2,614	2,050	-	-	20	26	-	-	2	T	T	T	-	-	-	-	T	-	-	-	5	-	-	-	-	-	-	12	8	1	1	15	-	2	28	-	-
Fair	All soils	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Maximum each species	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Atepic shaly c1	1,600	1,600	-	-	10	10	-	-	2	1	-	-	-	-	-	-	-	1	-	-	-	-	1	1	1	-	-	-	-	-	-	-	1	81	1	-	
Poor	All soils	1,833	1,833	-	-	10	-	-	-	T	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	29	41	-	-	-	-	-	-	27	-	-	

RANGE YIELD AND COMPOSITION
UPLAND STONY HILLS (JUNIPER)

Range Condition	Soil Taxonomic Unit	Total Annual Yield				Number of Plots	Species Composition (Percent)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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		Favorable Years		Unfavorable Years			Indian Ricegrass	Bluebunch Wheatgr.	Sandberg Bluegrass	Needleandthread	Cheatgrass	Prairie Junegrass	Tall Native Bluegr.	Great Basin Wildrye	Squirreltail	Idaho Fescue	Sand Dropseed	Threawn	Others	Phlox	Sego Lily	Hawksbeard	Pussytoes	Annuals	Penstemon	Daisy	Mustard	Balsamroot	Others	Globemallow	Hairy Goldaster	Silver Sagebrush	Low Sagebrush	Birchleaf Mahogany	Pinon Pine	Pricklypear	Cliffrose	Bitterbrush	Black Sagebrush	Snakeweed	Horsebrush	Yellowbrush	Juniper	Big Sagebrush	Rubber Rabbitbrush																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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RANGE YIELD AND COMPOSITION
UPLAND STONY HILLS (JUNIPER) SUMMER PRECIPITATION

Range Condition	Soil Taxonomic Unit	Total Annual Yield				Number of Plots	Species Composition (Percent)																												
							Grasses												Forbs						Shrubs										
		Favorable Years		Unfavorable Years			Bluebunch Wheatgr.	Indian Ricegrass	Tall Native Bluegr.	Dryland Sedge	Needleandthread	Galleta	Blue Grama	Western Wheatgrass	Prairie Junegrass	Threawn	Squirreltail	Sandberg Bluegrass	Cheatgrass	Bullgrass	Phlox	Others	Hairy Goldaster	American Vetch	Loco	Daisy	Black Sagebrush	Yellowbrush	Woody Aster	Big Sagebrush	Pinon Pine	Snakeweed	Bitterbrush	Juniper	Phlox
		High	Average	Average	Low																														
Good	All soils	2,200	1,567	561	561	13	16	5	1	2	2	T	2	T	2	-	-	-	-	-	T	1	2	-	-	-	-	-	-	-	35	1	T	30	2
	Maximum each species	-	-	-	-	-	21	18	4	27	10	2	10	2	3	-	-	-	-	-	2	6	3	-	-	-	-	-	-	45	6	5	40	2	
Fair	All soils	1,940	1,887	481	481	24	2	3	T	-	T	-	1	T	1	T	T	4	1	-	-	4	-	1	-	-	-	1	4	16	-	T	61	T	
	Maximum each species	-	-	-	-	-	2	16	1	-	1	-	16	1	3	1	1	9	2	-	-	5	-	2	-	-	-	2	10	39	-	1	84	1	
Poor	All soils	2,180	2,128	1,716	1,679	11	2	1	T	T	-	-	-	-	T	-	T	-	-	6	-	T	-	-	1	T	6	2	-	10	1	-	-	70	-
	Maximum each species	-	-	-	-	-	4	2	1	T	-	-	-	-	1	-	1	-	-	16	-	T	-	-	4	1	20	8	-	26	2	-	-	77	-

UPLAND STONY LOAM

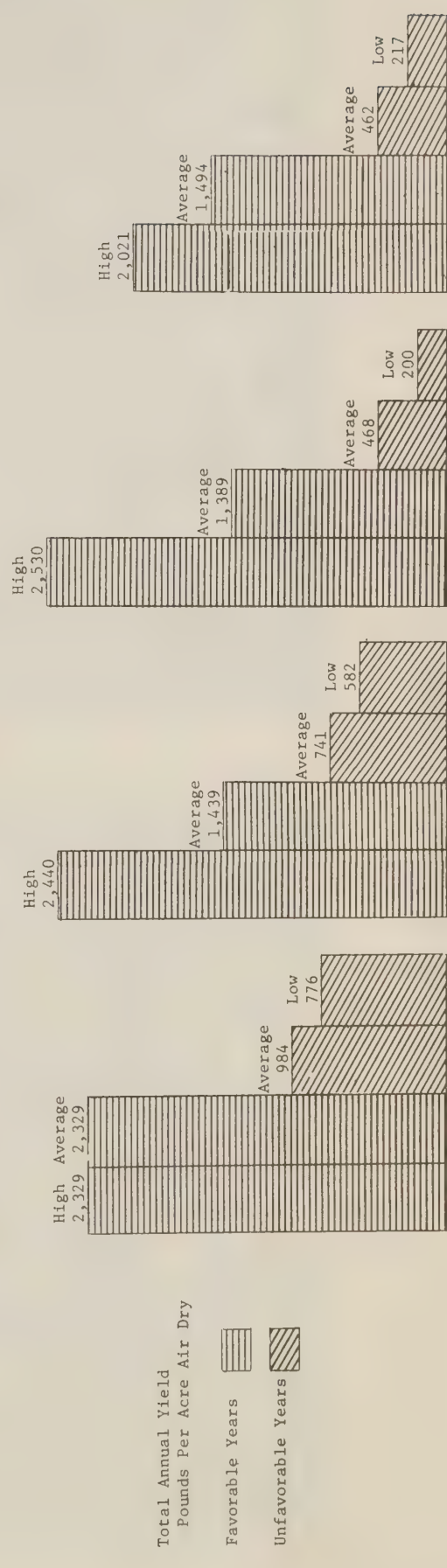
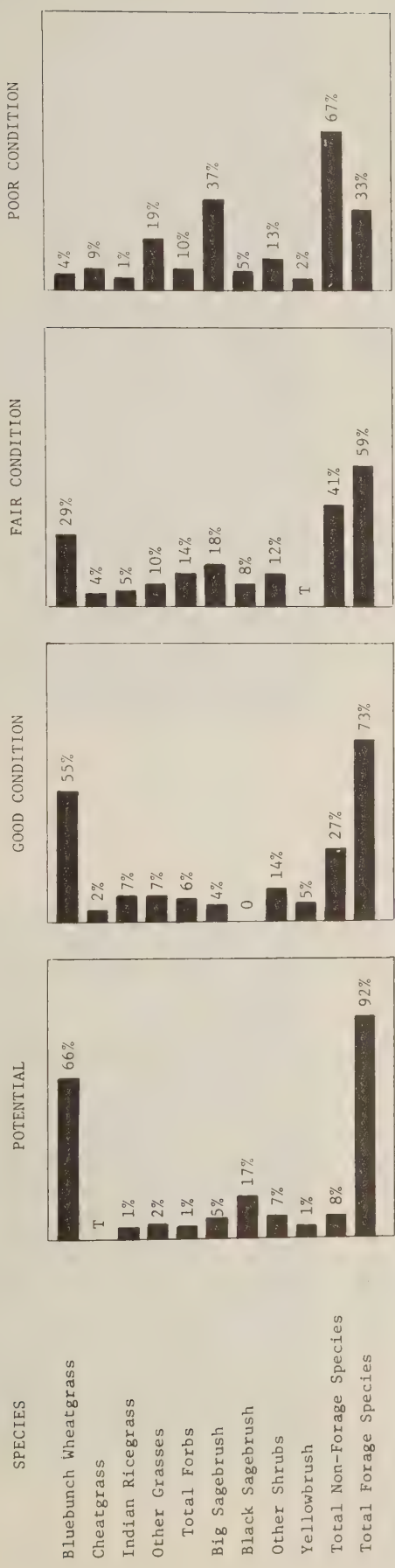
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UPLAND STONY LOAM continued

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YIELD AND VEGETATION COMPOSITION

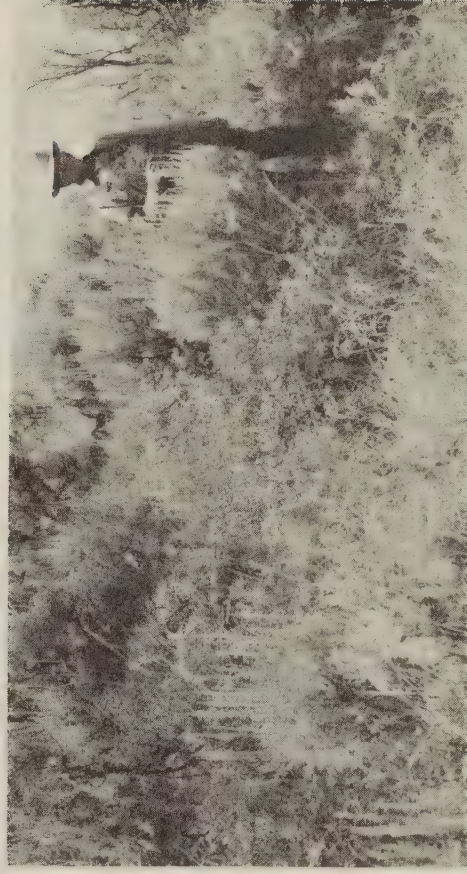
Upland Stony Loam Range Site



UPLAND STONY LOAM RANGE SITE



EXCELLENT CONDITION



GOOD CONDITION



FAIR CONDITION

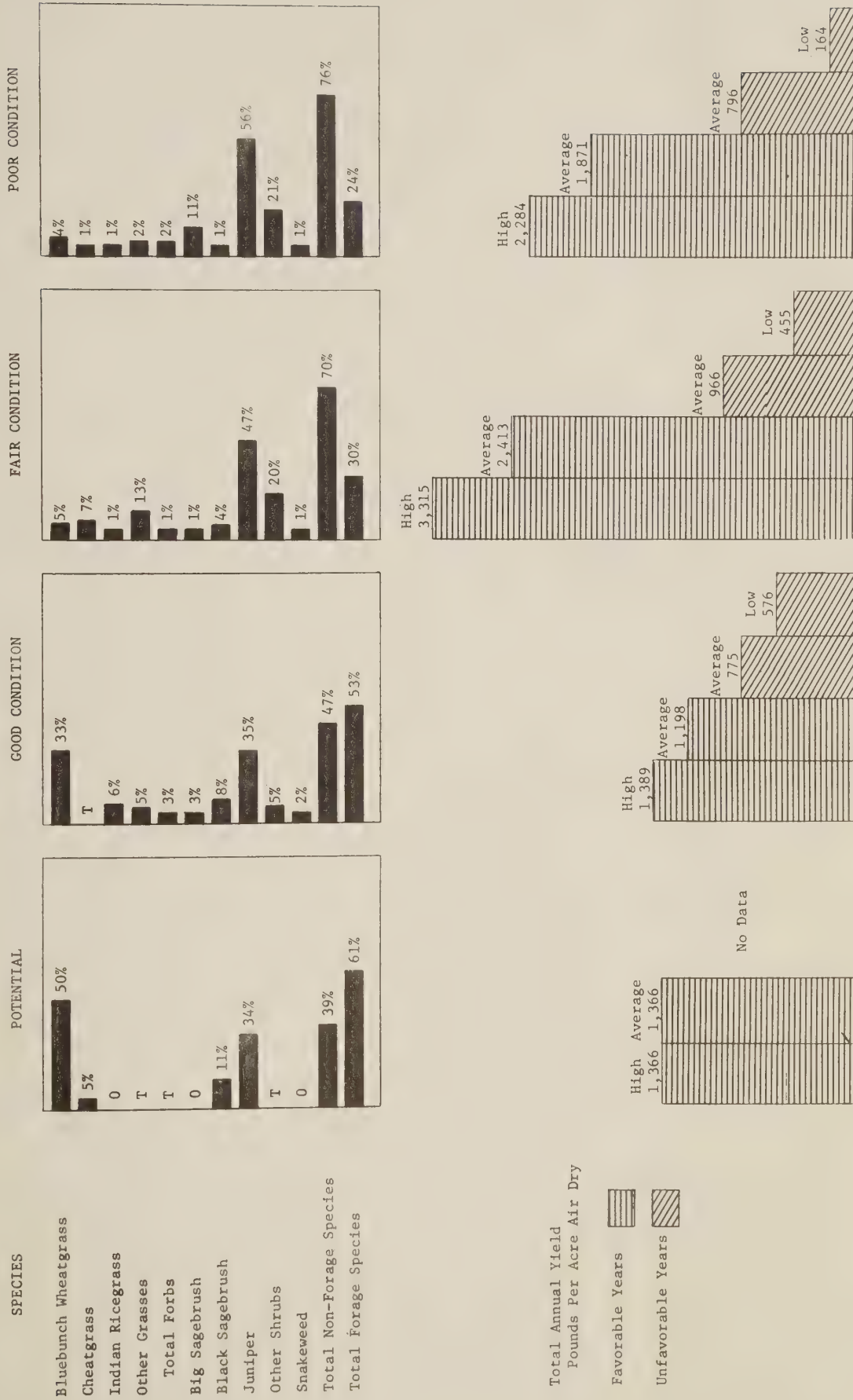


POOR CONDITION

[illegible]

YIELD AND VEGETATION COMPOSITION

Upland Stony Loam (Juniper) Grazable Woodland Site



RANGE YIELD AND COMPOSITION
UPLAND STONY LOAM (SUMMER PRECIPITATION)

Range Condition	Soil Taxonomic Unit	Total Annual Yield				Number of Plots	Species Composition (Percent)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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		Favorable Years		Unfavorable Years			High	Average	Low	Crested Wheatgrass	Needleandthread	Dryland Sedge	Western Wheatgrass	Galleta	Lettelman Needlegr.	Indian Ricegrass	Bluebunch Wheatgr.	Squirreltail	Prairie Junegrass	Tall Native Bluegr.	Blue Grama	Cheatgrass	Threawn	Annals	Indian Paintbrush	Globemallow	Aster	Mustard	Narrowleaf Lotus	Cinquefoil	Penstemon	Daisy	Herbaceous Sage	Buckwheat	Oakbrush	Woody Aster	Phlox	Yellowbrush	Black Sagebrush	Snakeweed	Pricklypear	Rubber Rabbitbrush	Bitterbrush	Big Sagebrush																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Good	All soils	-	-	710	530	2	18	19	14	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

RANGE YIELD AND COMPOSITION

SEMIDESERT ALKALI FLATS

[illegible]

RANGE YIELD AND COMPOSITION SEMIDESERT GRAVELLY LOAM

[illegible]

RANGE YIELD AND COMPOSITION

SEMIDESERT GRAVELLY LOAM (SUMMER PRECIPITATION)

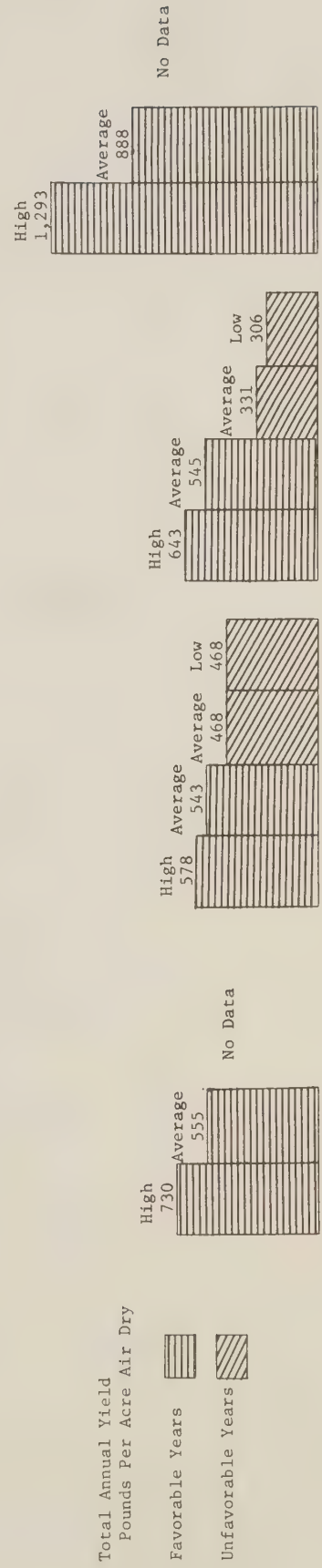
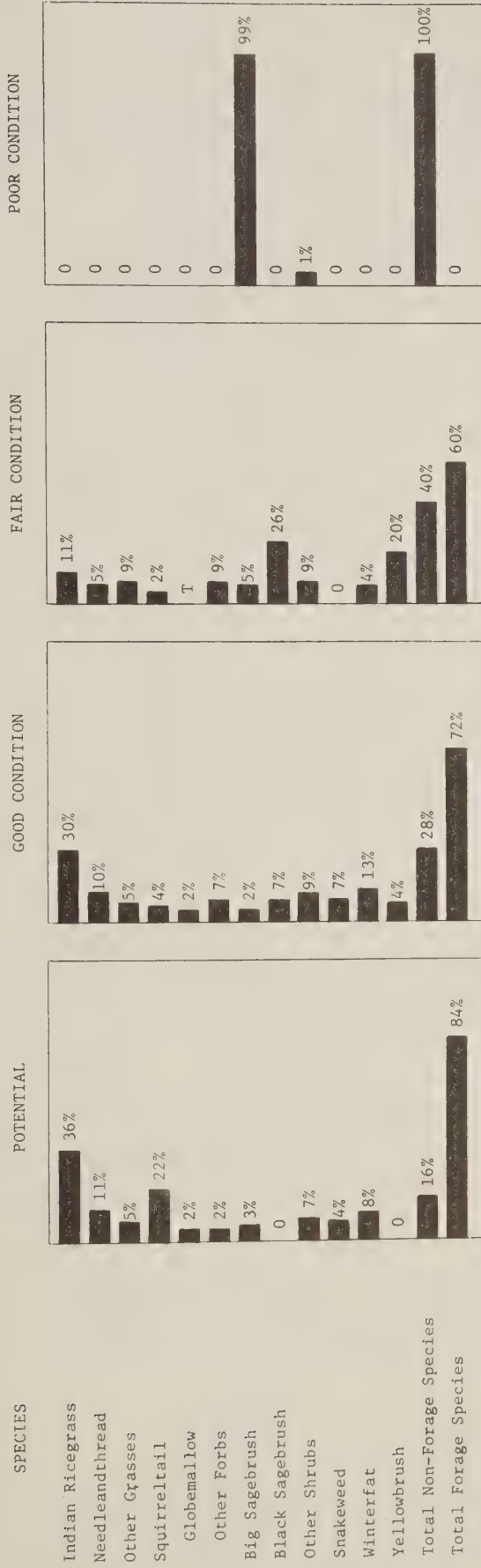
Range Condition	Soil Taxonomic Unit	Total Annual Yield			Number of Plots	Species Composition (Percent)																											
						Grasses				Forbs				Shrubs																			
		Favorable Years		Unfavorable Years		High	Average	Average	Low	Squirreltail	Sand Dropseed	Blue Grama	Indian Ricegrass	Bullgrass	Sandberg Bluegrass	Bluebunch Wheatgr.	Needleandthread	Galleta	Cheatgrass	Annals	Cryptantha	Globemallow	Others	Winterfat	Shadscale	Greasewood	Horsebrush	Buckwheat	Fourwing Saltbush	Big Sagebrush	Yellowbrush	Snakeweed	
Good	All soils	1,900	1,578	475	475	18	1	3	T	1	48	1	1	1	15	-	6	1	2	-	2	4	T	1	1	3	7	T	1				
	Maximum each species	-	-	-	-	-	4	21	3	1	86	1	2	4	46	-	21	3	5	-	17	34	3	2	2	5	20	1	4				
	Crandall	-	-	475	475	6	4	2	-	1	-	-	-	4	46	-	10	3	5	-	-	-	-	-	-	20	1	4					
Fair	All soils	1,267	1,216	-	-	12	-	10	14	-	-	-	9	12	48	-	-	-	-	2	-	-	-	-	-	5	-	1					
	Maximum each species	-	-	-	-	-	-	10	14	-	-	-	12	16	58	-	-	-	-	2	-	-	-	-	-	7	-	2					
	All soils	900	822	255	255	44	1	1	-	2	-	T	-	2	T	3	1	8	T	-	T	1	-	-	-	72	8	-					
Poor	Maximum each species	-	-	-	-	-	2	27	-	7	-	1	-	8	1	22	23	36	1	-	3	47	-	-	-	98	26	-					
	Hiko Springs	822	820	-	-	20	2	-	-	-	-	T	-	-	-	-	-	-	-	-	-	-	-	-	-	98	-	-					
	Sanpete	-	-	255	255	10	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	99	-	-					

SEMIDESERT GRAVELLY LOAM (JUNIPER-PINON)

[illegible]

YIELD AND VEGETATION COMPOSITION

Semidesert Limy Loam Range Site



RANGE YIELD AND COMPOSITION SEMIDESERT LOAM

[illegible]

RANGE YIELD AND COMPOSITION

Range Condition	Soil Taxonomic Unit	Total Annual Yield			Number of Plots	Species Composition (Percent)																																									
						Grasses														Forbs										Shrubs																	
		Favorable Years		Unfavorable Years		Indian Ricegrass	Needleandthread	Blue Grama	Western Wheatgrass	Sandberg Bluegrass	Sand Droseed	Bluebunch Wheatgr.	Cheatgrass	Squirreltail	Galleta	False Buffalo	Stickseed	Mustard	Annals	Pensstemon	Aster	Loco	Phlox	Buckwheat	Daisy	Globemallow	Leptodactylon	Others	Peavine	Russlan Thistle	Juniper	Greasewood	Phlox	Black Sagebrush	Winterfat	Fringed Sagebrush	Big Sagebrush	Snakeweed	Shadscale	Yellowbrnsh	Buckwheat	Prtcklypear	Bud Sagebrush				
		High	Average	Average			Low	11	7	6	8	T	5	1	6	-	2	T	9	T	T	T	T	1	T	T	1	T	T	T	-	-	-	-	-	-	3	6	23	8	2	1	T	T	2		
		-	-	-		-	54	365	390	365	-	-	22	21	25	27	1	1	25	3	29	-	12	2	46	1	1	2	2	3	1	T	T	T	-	-	-	6	15	55	23	8	6	T	T	9	
Good	All soils	1,100	692	390	365	54																																									
	Maximum each species	-	-	-	-	-																																									
Fair	All soils	720	696	288	278	26																																									
	Maximum each species	-	-	-	-	-																																									
Poor	All soils	2,079	1,236	359	287	142																																									
	Maximum each species	-	-	-	-	-																																									
	Ravola loam	1,229	1,017	393	322	65																																									
	Decca loam	2,079	2,079	-	-	12																																									
	Uvada	-	-	-	142	4																																									

RANGE YIELD AND COMPOSITION

SEMIDESERT SAND

Range Condition	Soil Taxonomic Unit	Total Annual Yield			Number of Plots	Species Composition (Percent)																												
						Grasses								Forbs								Shrubs												
		Favorable Years		Unfavorable Years		Needleandthread	Nevada Bluegrass	Indian Ricegrass	Thickspike Wheatgr.	Cheatgrass	Western Wheatgrass	Alkali Sacaton	Saltgrass	Annals	Skeletonweed	Beeflower	Russian Thistle	Scurfpea	Mustard	Sand Lilly	Sandbur	Aster	Poverty Weed	Shadscale	Gray Molly	Bud Sagebrush	Spiny Horsebrush	Yellowbrush	Big Sagebrush	Rubber Rabbitbrush	Squawbush	Fourwing Saltbush	Greasewood	
		High	Average	Average																														Low
Good	All soils	1,072	774	442	420	80	14	T	47	T	T	T	2	2	4	1	T	1	T	T	1	-	-	-	-	-	1	6	12	1	7	T	T	
	Max. each species	-	-	-	-	-	57	1	96	1	T	8	7	15	4	1	5	1	T	3	-	-	-	-	-	-	4	39	45	2	29	T	T	
	Dilts loamy sand	1,072	1,072	698	698	20	57	1	15	1	-	-	-	15	4	-	-	-	-	-	-	-	-	-	-	-	4	2	1	-	-	-	-	
	Yenrab fs high rainfall	664	664	442	420	60	-	-	58	-	T	3	2	T	-	T	1	1	T	1	-	-	-	-	-	-	-	7	15	1	10	T	T	
Fair	All soils	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Max. each species	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Yenrab fs high rainfall	663	663	-	-	10	-	-	8	-	T	1	15	1	-	-	-	-	-	5	1	T	-	-	-	-	-	-	6	3	58	T	T	
	All soils	797	797	465	465	14	-	-	1	-	-	-	-	9	-	-	1	-	-	1	-	-	-	1	11	2	2	-	61	-	-	-	-	11
Poor	Max. each species	-	-	-	-	-	-	-	1	-	-	-	12	-	-	-	2	-	-	2	-	-	1	40	6	8	-	83	-	-	-	-	-	39
	Yenrab fs high rainfall	797	797	-	-	10	-	-	1	-	-	-	12	-	-	-	T	-	-	2	-	-	1	-	-	-	-	-	83	-	-	-	-	-

RANGE YIELD AND COMPOSITION
SEMIDESERT SAND (JUNIPER)

Range Condition	Soil Taxonomic Unit	Total Annual Yield				Number of Plots	Species Composition (Percent)										
							Grasses					Forbs			Shrubs		
		Favorable Years		Unfavorable Years			Indian Ricegrass	Cheatgrass	Streambank Wheatgr.	Sand Dropseed	Needleandthread	Russian Thistle	Mustard	Buckwheat	Scurfpea	Juniper	Big Sagebrush
		High	Average	Average	Low												
Good	All soils	1,393	1,393	868	868	20	24	5	1	14	2	4	6	T	10	34	T
	Maximum each species	-	-	-	-	-	36	9	2	27	5	7	13	T	19	35	1

RANGE YIELD AND COMPOSITION

SEMI-DESERT SAND (SUMMER PRECIPITATION)

Range Condition	Soil Taxonomic Unit	Total Annual Yield				Number of Plots	Species Composition (Percent)																									
		Favorable Years		Unfavorable Years			Grasses								Forbs				Shrubs													
							High	Average	Average	Low	Blue Grama	Sand Dropped	Galleta	Sixweeks Grama	Red Brome	Cheatgrass	Spike Dropped	Tangletop	Others	Russian Thistle	Euphorbia	Filerie	Sandbur	Loco	Desert Marigold	Annals	Bud Sagebrush	Gray Molly	Greasewood	Shadscale	Big Sagebrush	Bitterbrush
Good	All soils	-	-	825	825	2	21	49	-	-	-	-	-	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21	
Fair	All soils	-	-	759	759	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Poor	All soils	-	-	426	270	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Maximum each species	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Sheppard sl	-	-	465	465	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

SEMIDESERT SHALLOW LOAM 8-10" PZ

[illegible]

RANGE YIELD AND COMPOSITION

SEMI-DESERT SHALLOW LOAM 10-12" PZ

Range Condition	Soil Taxonomic Unit	Total Annual Yield			Number of Plots	Species Composition (Percent)																																				
						Grasses														Forbs														Shrubs								
		Favorable Years		Unfavorable Years		High	Average	Average	Low	Bluebunch Wheatgr.	Indian Ricegrass	Cheatgrass	Sandberg Bluegrass	Nevada Bluegrass	Needleandthread	Squirreltail	Lomatium	Phlox	Others	Sandwort	Buttercup	Annals	Buckwheat	Bladderpod	Sunflower	Loco	Leptodactylon	Penstemon	Mustard	Stickseed	Yellowbush	Shadscale	Buckwheat	Black Sagebrush	Pricklypear	Big Sagebrush	Mormon tea	Winterfat	Snakeweed	Rubber Rabbitbrush	Phlox	
Excellent	All soils	1,506	1,044	607	461	124	42	9	3	2	1	3	3	T	1	1	T	T	1	1	T	1	1	1	T	T	T	T	T	-	-	7	2	1	12	1	3	T	5	T	1	
	Maximum each species	-	-	-	-	-	79	18	14	7	5	17	23	2	4	6	3	1	6	6	1	4	1	4	1	2	1	-	-	33	11	5	51	4	24	1	26	1	6	7		
	Amtoft loam & flaggy loam	1,506	1,051	630	568	104	44	10	4	2	1	T	3	-	1	1	T	T	1	1	1	T	T	T	T	T	T	T	-	-	9	2	1	9	-	4	T	6	T	1		
Good	White Knob grav sl	1,017	1,017	461	461	20	36	-	1	7	-	17	-	2	3	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	4	-	-	-	-	-	-	
	All soils	1,356	750	332	186	33	25	4	2	3	T	-	2	-	1	3	-	-	-	-	-	-	-	-	-	-	-	-	T	T	21	7	1	23	-	T	-	-	5	1	T	
	Maximum each species	-	-	-	-	-	57	8	4	7	4	-	6	-	4	5	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	35	13	5	34	-	5	-	2	16	12	1
	Amtoft flaggy 1 & 1	1,356	750	332	186	33	25	4	2	3	T	-	2	-	1	3	-	-	-	-	-	-	-	-	-	-	-	-	T	T	21	7	1	23	-	T	-	-	5	1	T	

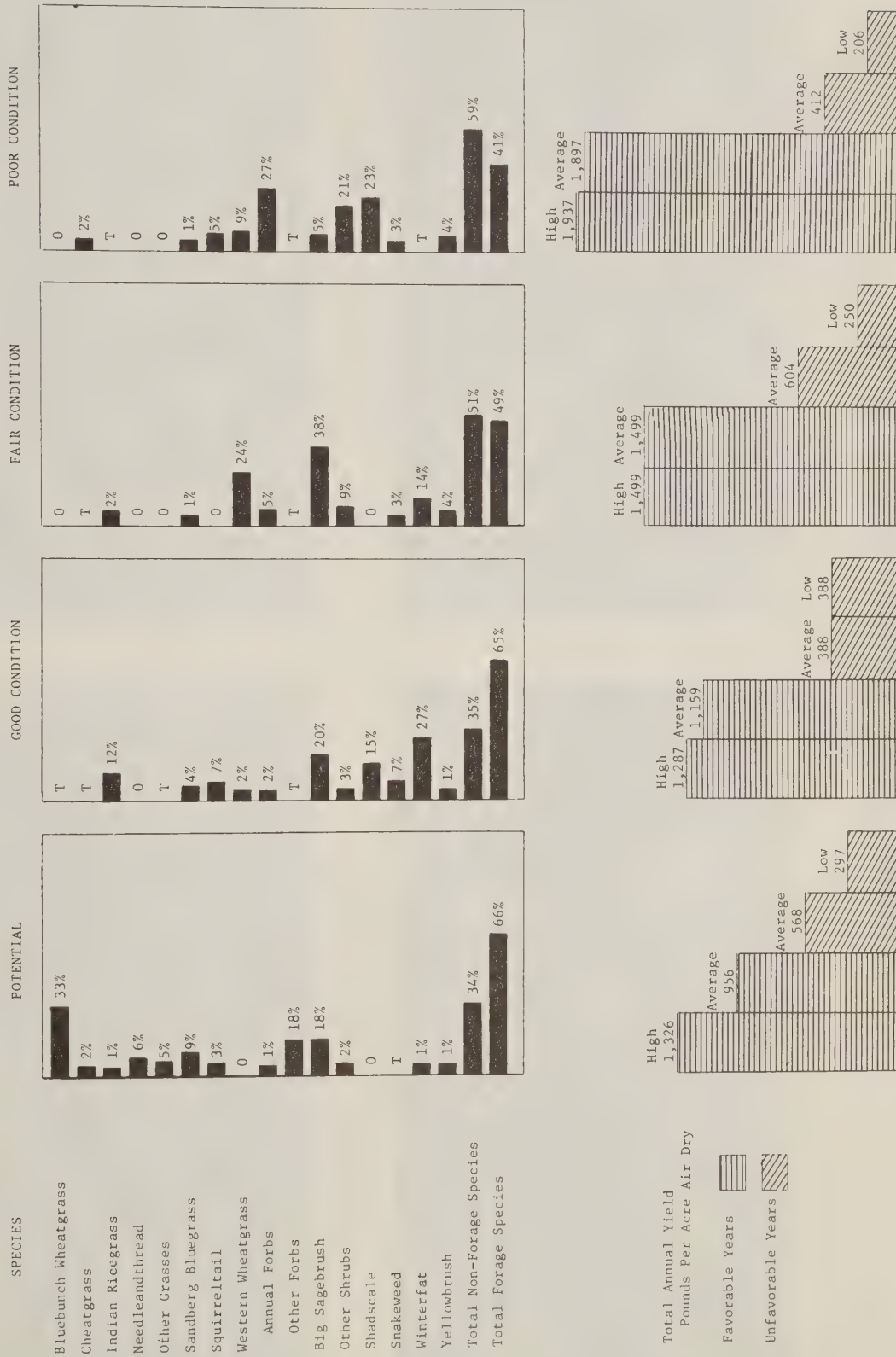
RANGE YIELD AND COMPOSITION

SEMIDESERT SHALLOW LOAM (JUNIPER-PINON)

Range Condition	Soil Taxonomic Unit	Total Annual Yield				Number of Plots	Species Composition (Percent)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
							Grasses				Forbs										Shrubs																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
		Favorable Years		Unfavorable Years							High Average	Average	Low	Bullgrass	Bluebunch Wheatgr.	Indian Ricegrass	Dryland Sedge	Penstemon	Mat Buckwheat	Hairy Goldaster	Mat Astragalus	Bitterweed	Senecio	Arenaria	Indian Paintbrush	Mat Aster	Cryptantha	Buckwheat	Bladderpod	Others	Evening Primrose	Phlox	Rock Goldenrod	Shadscale	Pinon Pine	Juniper	Pricklypear	Phlox	Horsebrush	Snakeweed	Yellowbrush	Big Sagebrush	Rubber Rabbitbrush																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
Excellent	All soils	789	789	403	352	31	9	5	1	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	4	1	36	33	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

YIELD AND VEGETATION COMPOSITION

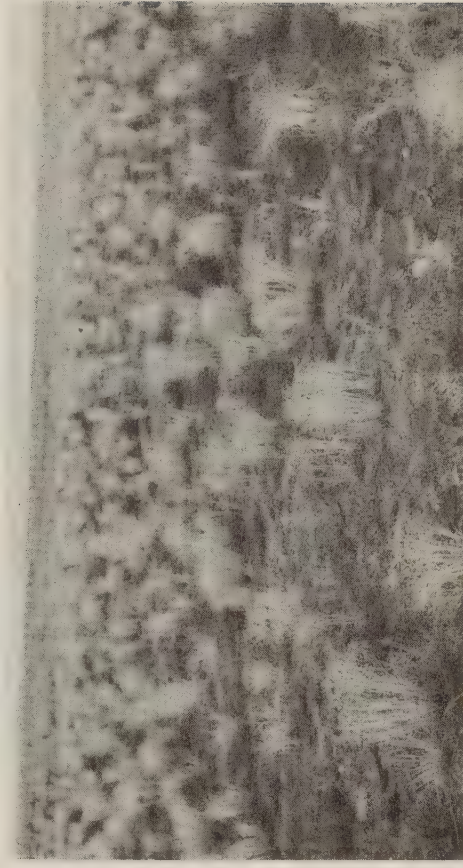
Semidesert Loam Range Site



SEMIDESERT LOAM RANGE SITE



EXCELLENT CONDITION



GOOD CONDITION



FAIR CONDITION



POOR CONDITION

SEMIDESERT STONY LOAM (JUNIPER-PINON)

[illegible]

RANGE YIELD AND COMPOSITION

SEMI-DESERT STONY HILLS (SUMMER PRECIPITATION)

Range Condition	Soil Taxonomic Unit	Total Annual Yield				Number of Plots	Species Composition (Percent)																							
		Favorable Years		Unfavorable Years			Grasses								Forbs				Shrubs											
							High	Average	Average	Low	Indian Ricegrass	Galleta	Cheatgrass	Squirreltail	Bluebunch Wheatgr.	Red Brome	Sandberg Bluegrass	Nevada Bluegrass	Lomatium	Cryptantha	Annals	Sego Lily	Skeletonweed	Others	Bud Sagebrush	Black Sagebrush	Shadscale	Yellowbrush	Winterfat	Horsebrush
Excellent	All soils	-	-	394	316	40	16	6	2	1	37	T	2	T	T	1	T	T	-	-	-	4	3	13	4	T	8	T	2	2
	Maximum each species	-	-	-	-	-	39	18	4	1	54	T	4	1	1	T	-	-	-	-	-	9	10	20	11	1	20	2	9	
	Checkett vcobl	-	-	394	316	40	16	6	2	1	37	T	2	T	T	-	-	-	-	-	-	4	3	13	4	T	8	T	2	2
	All soils	900	774	-	-	30	3	29	4	-	14	-	T	T	-	-	T	T	-	-	-	T	8	7	4	T	1	10	14	14
Good	Maximum each species	-	-	-	-	-	8	37	7	-	30	-	1	T	-	-	T	T	-	-	-	T	23	19	13	T	4	18	42	42
	Checkett vcobl	900	774	-	-	30	3	29	4	-	14	-	T	T	-	-	T	T	-	-	-	T	8	7	4	T	1	10	14	14
	All soils	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Maximum each species	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fair	All soils	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Maximum each species	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Checkett vcobl	419	419	-	-	10	-	11	2	T	-	-	-	-	-	-	-	-	-	-	-	-	19	-	8	2	55	2	-	-

SOUTHERN SEMIDESERT LOAM

Range Condition	Soil Taxonomic Unit	Total Annual Yield				Number of Plots	Species Composition (Percent)										
							Grasses		Forbs		Shrubs						
		Favorable Years	Unfavorable Years	High	Average		Average	Low	Galleta	Red Brome	Cheatgrass	Buckwheat	Mustard	Yellowbush	Snakeweed	Blackbrush	Indigobush
Excellent	All soils	670	585	-	-	30	65	1	1	3	T	2	18	4	2	1	
	Maximum each species	-	-	-	-	-	88	1	1	5	1	3	27	6	3	4	

RANGE YIELD AND COMPOSITION
SOUTHERN SEMIDESERT SAND

Range Condition	Soil Taxonomic Unit	Total Annual Yield			Number of Plots	Species Composition (Percent)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
						Grasses												Forbs												Shrubs																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
		Favorable Years		Unfavorable Years		High	Average	Average	Low	Tangletop	Cheatgrass	Indian Ricegrass	Red Brome	Sixweeks Fescue	Spike Dropseed	Sand Dropseed	Needleandthread	Threawn	Owllover	Gumweed	False Yarrow	Mustard	Euphorbia	Filerie	Russian Thistle	Globemallow	Others	Croton	Mormon tea	Sand Sagebrush	Yucca	Buckheart	Snakeweed	Fourwing Saltbush	Indigobush																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
Good	All soils	1,499	902	-	-	40																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				

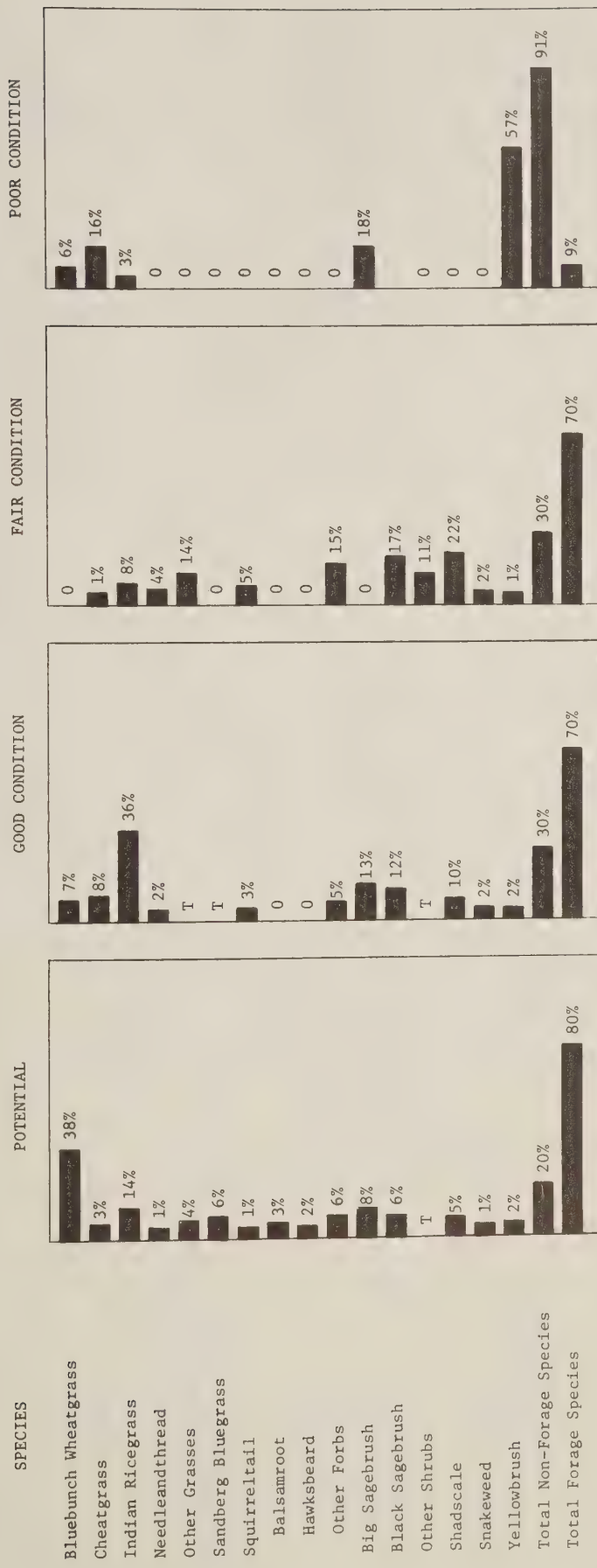
RANGE YIELD AND COMPOSITION

SOUTHERN SEMIDESERT STONY LOAM

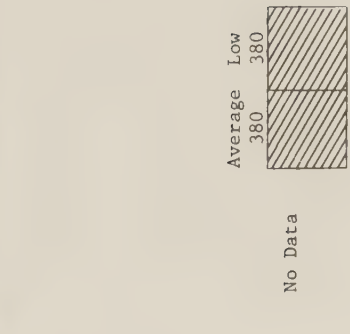
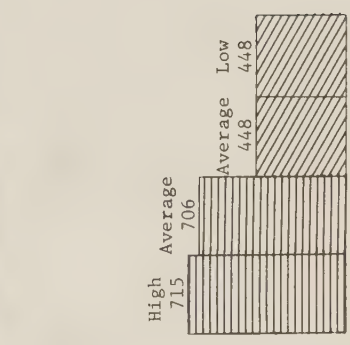
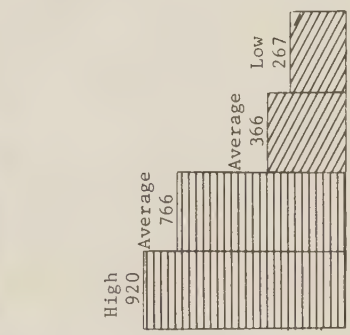
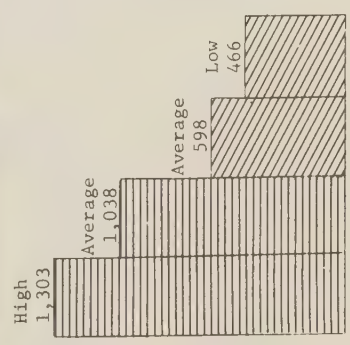
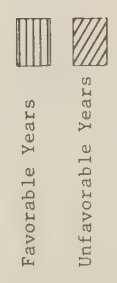
Range Condition	Soil Taxonomic Unit	Total Annual Yield				Number of Plots	Species Composition (Percent)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		Favorable Years		Unfavorable Years			Grasses						Shrubs																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
							High	Average	Average	Low	Squirreltail	Bush Muhly	Indian Ricegrass	Galleta	Threawn	Dropseed	Schismus	Desert Almond	Snakeweed	Blackbrush	Mormontea																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
Good		1,907	1,907	-	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

YIELD AND VEGETATION COMPOSITION

Semidesert Stony Loam Range Site



Total Annual Yield
Pounds Per Acre Air Dry



DESSERT BOTOMS

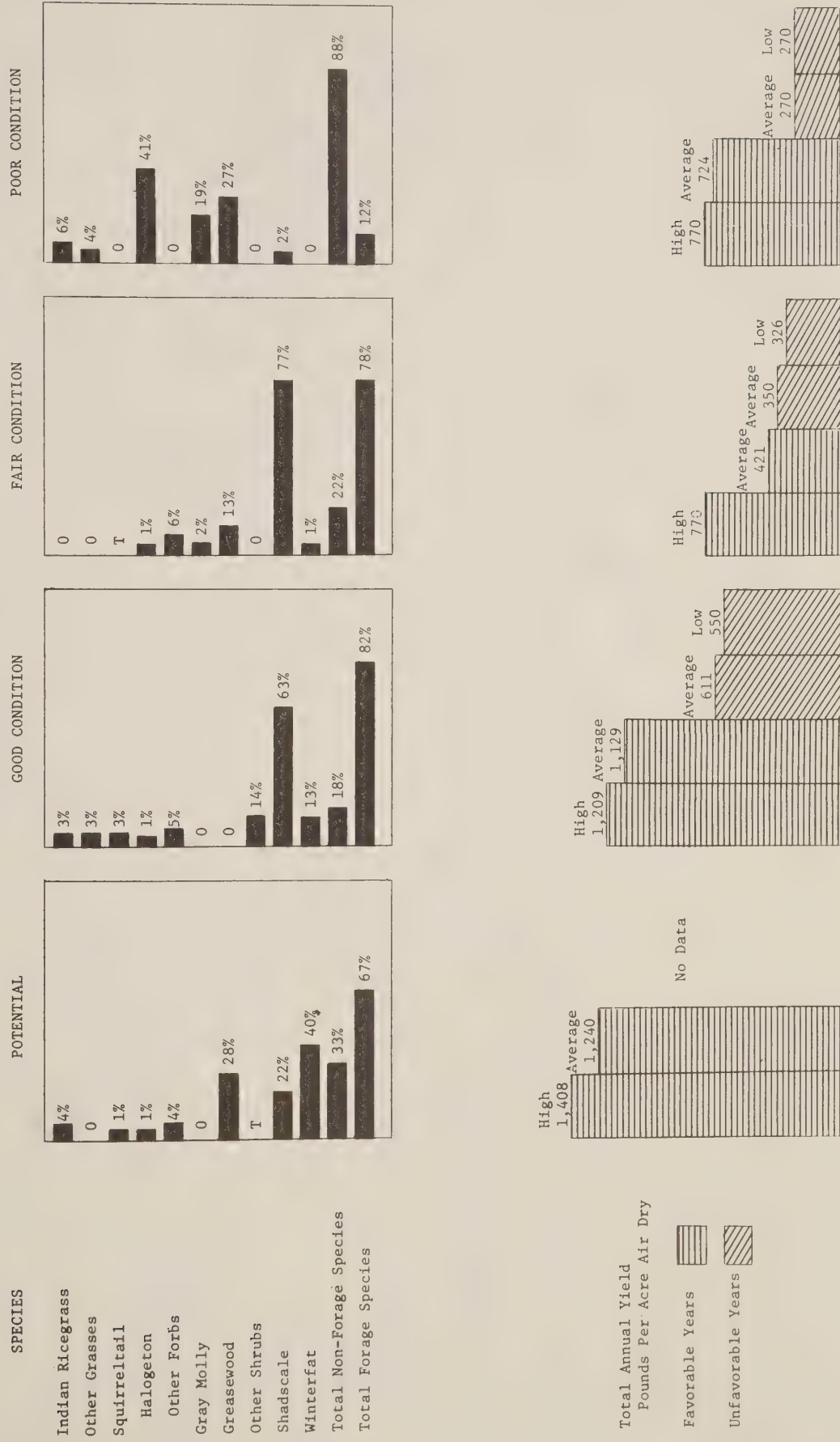
Range Condition	Soil Taxonomic Unit	Total Annual Yield				Number of Plots	Species Composition (Percent)										
		Favorable Years		Unfavorable Years			Grasses	Forbs		Shrubs							
		High	Average	Average	Low			Indian Ricegrass	Squirreltail	Globemallow	Halogeton	Leptodactylon	Snakeweed	Shadscale	Others	Winterfat	Bud Sagebrush
Excellent	All soils	1,408	970	-	-	20	14	3	T	T	T	1	3	8	2	68	T
	Maximum each species	-	-	-	-	-	21	4	T	T	T	2	6	13	4	76	1

RANGE YIELD AND COMPOSITION
DESERT CLAY

Range Condition	Soil Taxonomic Unit	Total Annual Yield				Number of Plots	Species Composition (Percent)							
							Grasses		Forbs		Shrubs			
		Favorable Years		Unfavorable Years			Squirreltail	Saltweed	Inkweed	Pickleweed	Gray Molly	Horsebrush	Greasewood	Nuttalls Saltbush
Excellent	Anco sicl	High	Average	Average	Low	-								
		663	663	-	-	10	2	-	3	26	-	37	32	
Fair														

YIELD AND VEGETATION COMPOSITION

Desert Flat Range Site



RANGE YIELD AND COMPOSITION

DESERT GRAVELLY LOAM

Range Condition	Soil Taxonomic Unit	Total Annual Yield				Number of Plots	Species Composition (Percent)																										
		Favorable Years		Unfavorable Years			Grasses										Forbs						Shrubs										
							High	Average	Average	Low	Cheatgrass	Squirreltail	Threawn	Alkali Sacaton	Indian Ricegrass	Sandberg Bluegrass	Bluebunch Wheatgr.	Others	Sand Lily	Globemallow	Mustard	Penstemon	Halogeton	Stickleaf	Snakeweed	Yellowbrush	Horsebrush	Black Sagebrush	Winterfat	Phlox	Shadscale	Bud Sagebrush	Mormontea
Fair	All soils	789	768	295	184	50	32	3	2	2	2	14	T	3	T	T	T	1	T	1	2	T	1	3	12	4	T	1	15	T	1		
	Maximum each species	-	-	-	-	-	69	12	4	8	9	28	T	17	T	1	4	T	2	12	1	2	8	55	19	2	3	31	2	3			
	Hiko Springs sl	789	768	295	184	50	32	3	2	2	2	14	T	3	T	T	T	1	T	1	2	T	1	3	12	4	T	1	15	T	1		

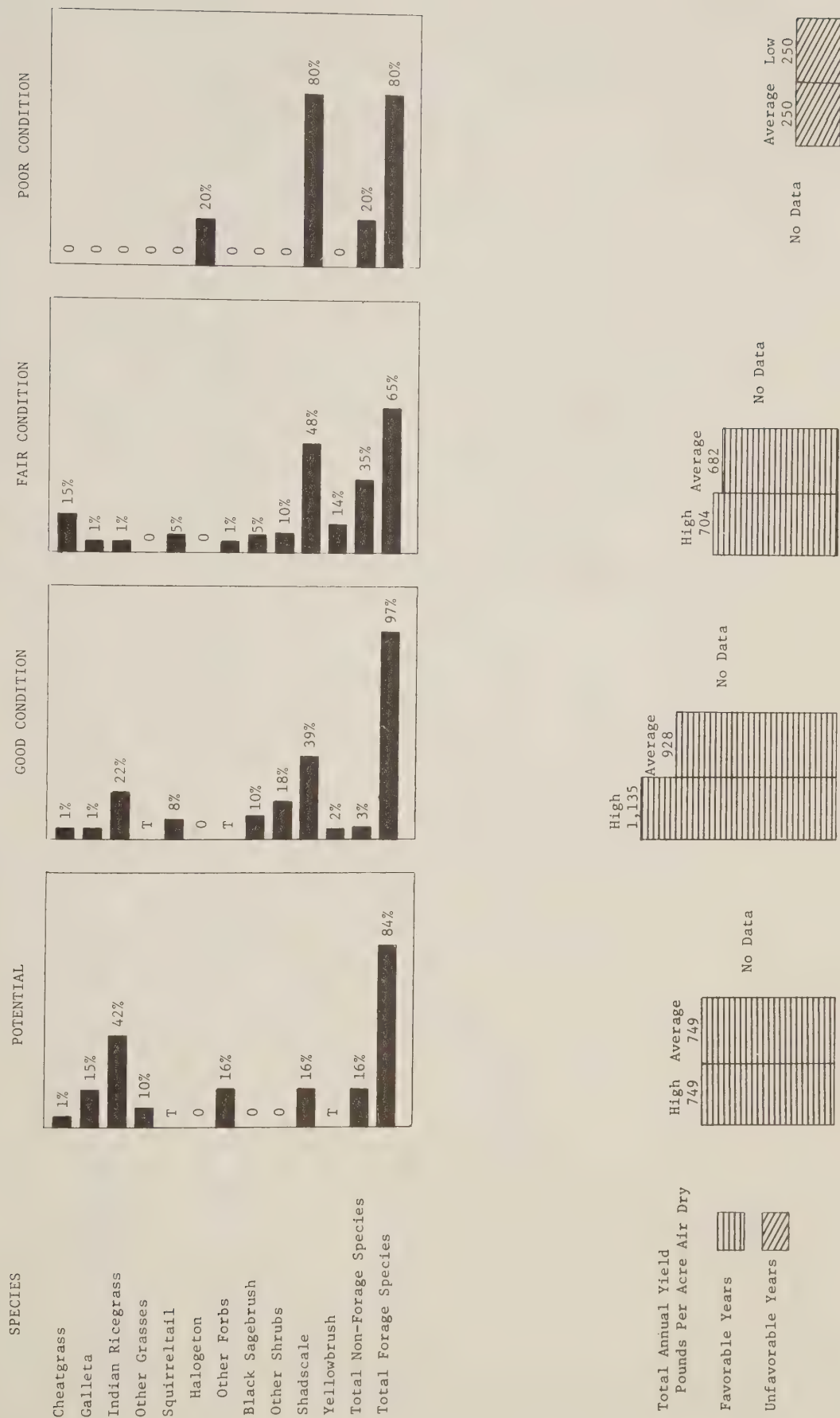
RANGE YIELD AND COMPOSITION

DESERT LOAM

Range Condition	Soil Taxonomic Unit	Total Annual Yield			Number of Plots	Species Composition (Percent)																									
						Grasses						Forbs				Shrubs															
		Favorable Years		Unfavorable Years		High	Average	Average	Low	Indian Ricegrass	Western Wheatgrass	Galleta	Cheatgrass	Squirreltail	Sixweeks Fescue	Sandberg Bluegrass	Daisy	Globemallow	Annuals	Desert Plantain	Skeleton Loco	Phlox	Halogeton	Bud Sagebrush	Pricklypear	Rubber Rabbitbrush	Winterfat	Black Sagebrush	Shadscale	Yellowbrush	
Excellent		749	749	-	-	10	41	10	15	1	T	T	-	12	1	1	T	1	1	-	1	-	-	-	-	-	-	16	T		
Good	All soils	1,135	928	-	-	20	22	-	-	T	8	8	-	-	-	-	T	-	-	-	-	-	-	-	-	-	-	18	10	39	2
	Maximum each species	-	-	-	-	-	40	-	-	1	8	-	T	-	-	-	T	-	-	-	-	-	-	-	-	-	-	37	20	52	4
Fair	All soils	704	682	-	-	15	1	-	1	15	5	5	-	-	-	-	-	1	-	-	-	-	-	5	3	3	-	5	48	14	
	Maximum each species	-	-	-	-	-	2	-	3	22	6	6	-	-	-	-	-	2	-	-	-	-	-	8	9	8	-	14	55	21	
Poor		-	-	250	250	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	-	-	-	-	-	-	-	80	-	

YIELD AND VEGETATION COMPOSITION

Desert Loam Range Site



RANGE YIELD AND COMPOSITION

DESERT MOUNTAIN

Range Condition	Soil Taxonomic Unit	Total Annual Yield				Number of Plots	Species Composition (Percent)																			
							Grasses								Forbs						Shrubs					
		Favorable Years	Unfavorable Years		High		Average	Average	Low	Bluebunch Wheatgr.	Sandberg Bluegrass	Cheatgrass	Indian Ricegrass	Galleta	Desert Needlegrass	Threawn	Needleandthread	Sego Lily	Mustard	Globemallow	Penstemon	Annals	Loco	Phlox	Others	Shadscale
Excellent	1,385	1,385	-	-		10				54	T	3	8	-	-	-	-	T	2	T	T	T	T	-	-	-
Good	All soils	1,385	1,385	654	617	14	41	T	2	8	16	3	2	-	T	1	T	-	T	T	-	T	T	-	1	25
Fair	Maximum each species	-	-	-	-	-	54	1	3	12	73	16	11	-	T	2	T	-	T	T	-	T	T	-	10	33
		-	-	430	430	1	-	-	-	12	-	-	-	28	-	-	-	-	-	-	-	-	-	35	25	-

Range Condition	Soil Taxonomic Unit	Total Annual Yield			Number of Plots	Species Composition (Percent)																													
						Grasses									Forbs									Shrubs											
		Favorable Years		Unfavorable Years		Galleata	Indian Ricegrass	Sand Dropseed	Spike Dropseed	Threawn	Black Grama	Cheatgrass	Sandberg Bluegrass	Squirreltail	Others	Stickseed	Russian Thistle	Mustard	Annals	Globemallow	Stickleaf	Halogeton	Aster	Loco	Buckwheat	Big Sagebrush	Mormontea	Rubber Rabbitbrush	Pricklypear	Horsebrush	Shadscale	Snakeweed	Fourwing Saltbush	Winterfat	
		High	Average	Average		Low																													
Good	All soils	820	658	200	189	32	6	46	5	1	2	3	T	-	3	T	3	T	3	T	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Maximum each species	-	-	-	-	-	14	74	14	4	6	9	T	T	-	11	1	8	T	8	T	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fair	All soils	1,594	1,594	416	126	30	-	18	1	-	1	-	16	T	-	-	30	T	2	2	1	2	1	1	-	-	-	-	7	1	7	2	12	-	-
	Maximum each species	-	-	-	-	-	-	29	2	-	2	-	35	-	1	-	58	T	6	3	4	4	2	2	-	-	-	-	20	2	21	6	35	-	-
Poor	All soils	704	704	138	35	37	-	6	1	-	-	3	2	-	-	-	4	-	17	1	-	-	13	1	T	22	T	13	5	-	-	11	1	-	-
	Maximum each species	-	-	-	-	-	-	18	4	-	-	11	9	-	-	-	6	-	61	5	-	-	44	4	1	80	1	55	26	-	-	39	2	-	-

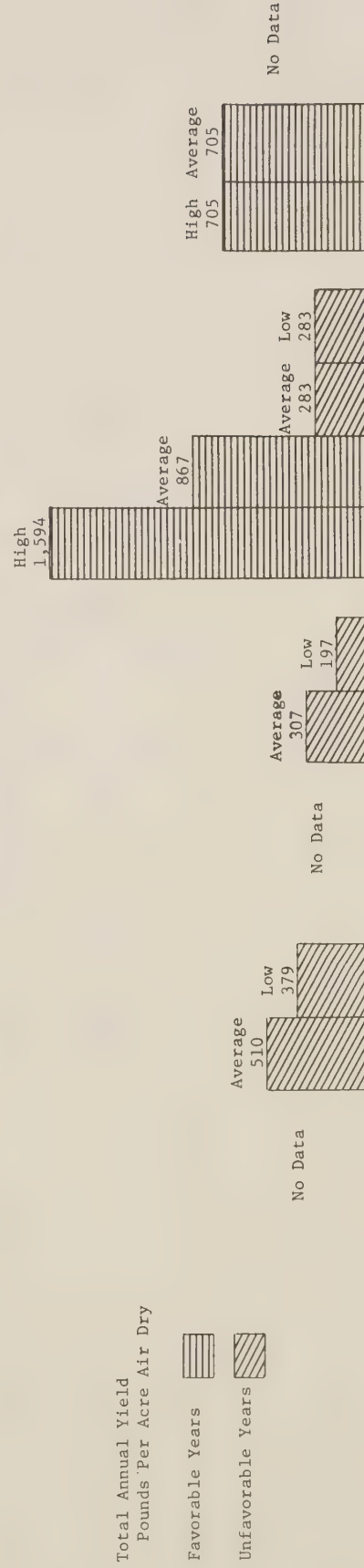
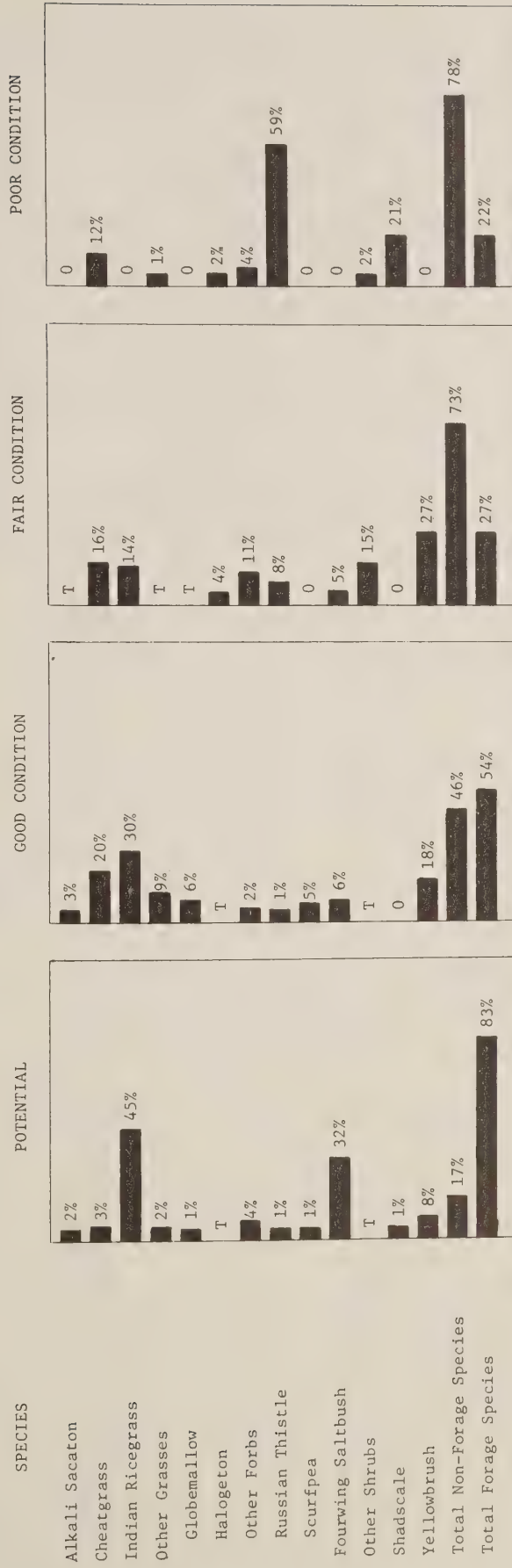
RANGE YIELD AND COMPOSITION

DESERT ALKALI BENCH

Range Condition	Soil Taxonomic Unit	Total Annual Yield			Number of Plots	Species Composition (Percent)																										
						Grasses						Forbs						Shrubs														
		Favorable Years		Unfavorable Years		High	Average	Low	Galleta	Sand Dropseed	Indian Ricegrass	Western Wheatgrass	Needleandthread	Cheatgrass	Threawn	Saltgrass	Pluffgrass	Globemallow	Halogeton	Mustard	Aster	Scurfpea	Annals	Inkweed	Snakeweed	Shadscale	Bud Sagebrush	Gray Molly	Yellowbrush	Mormontea		
Excellent	All soils	-	-	301	245	30	12	8	2	1	T	1	-	-	1	5	T	1	T	-	-	-	-	-	-	6	48	3	2	11		
	Maximum each species	-	-	-	-	-	24	1	23	5	3	1	2	-	-	1	15	T	3	1	-	-	-	-	-	12	75	6	5	32		
	Goshute grav sil	-	-	260	245	20	6	T	-	-	-	-	-	-	-	T	8	T	-	-	-	-	-	-	-	9	72	4	-	-		
	Uffens sil	-	-	384	384	10	24	-	23	5	3	1	2	-	-	1	-	-	3	1	-	-	-	-	-	-	-	-	-	5	32	
Good	All soils	-	-	174	141	20	-	-	-	-	T	-	-	-	-	14	-	-	-	-	-	-	-	-	-	33	45	8	-	-	-	
	Maximum each species	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26	-	-	-	-	-	-	-	-	-	49	49	8	-	-	-	
	Goshute grav sil	-	-	174	141	20	-	-	-	-	T	-	-	-	-	14	-	-	-	-	-	-	-	-	-	33	45	8	-	-	-	
	All soils	351	351	217	141	50	14	T	1	-	-	1	-	-	-	T	10	T	-	-	-	-	-	2	2	18	47	5	-	-	-	
Fair	Maximum each species	-	-	-	-	-	57	1	6	-	6	-	-	-	-	1	26	T	-	-	-	-	2	8	10	49	75	8	-	-	-	
	Goshute grav sil	-	-	217	141	40	3	T	T	-	-	-	-	-	-	T	11	T	-	-	-	-	-	-	-	21	59	6	-	-	-	
	Uffens sil	351	351	-	-	10	57	-	6	-	6	-	-	-	-	1	6	T	-	-	-	-	1	8	10	4	-	-	-	-	-	

YIELD AND VEGETATION COMPOSITION

Desert Alkali Sand Range Site



RANGE YIELD AND COMPOSITION

DESERT SILT FLATS

Range Condition	Soil Taxonomic Unit	Total Annual Yield			Number of Plots	Species Composition (Percent)												
						Grasses				Forbs				Shrubs				
		Favorable Years		Unfavorable Years		Squirreltail	Indian Ricegrass	Cheatgrass	Western Wheatgrass	Stickseed	Halogeton	Russian Thistle	Others	Globemallow	Yellowbush	Winterfat	Bud Sagebrush	Shadscale
Excellent	All soils	931	786	232	157	100	1	1	2	T	T	T	T	-	-	90	3	3
	Maximum each species	-	-	-	-	-	4	7	15	3	T	2	T	2	-	100	13	19
	Penoyer sil	656	656	503	503	20	2	4	8	2	-	-	-	1	-	54	12	16
Good	Penoyer sil	-	-	587	587	20	3	1	6	1	-	-	-	1	1	43	9	35
	All soils	809	809	347	347	30	1	7	1	-	30	5	-	T	1	37	T	18
Fair	Maximum each species	-	-	-	-	-	3	18	3	-	-	45	7	1	3	47	1	54
	Penoyer sil	809	809	-	-	10	3	18	3	-	-	-	-	1	3	17	1	54
		1,272	1,272	-	-	20	-	-	-	-	84	-	-	-	-	16	-	-

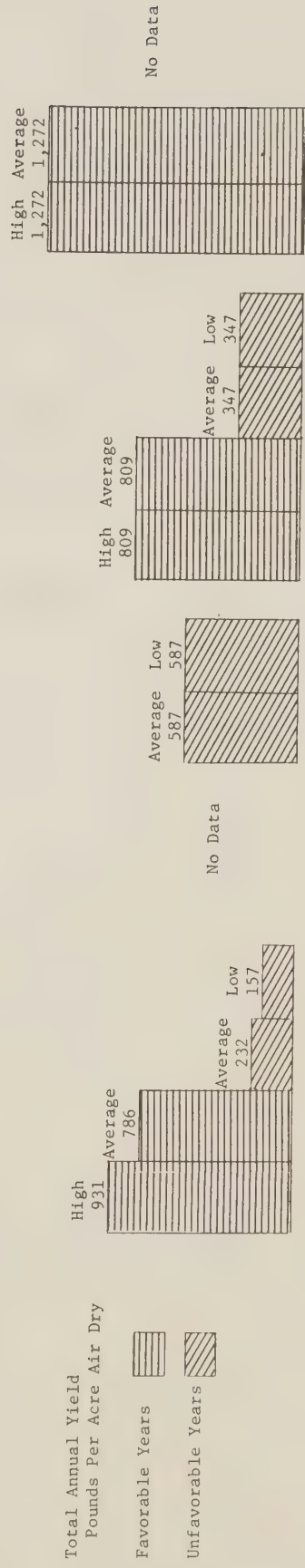
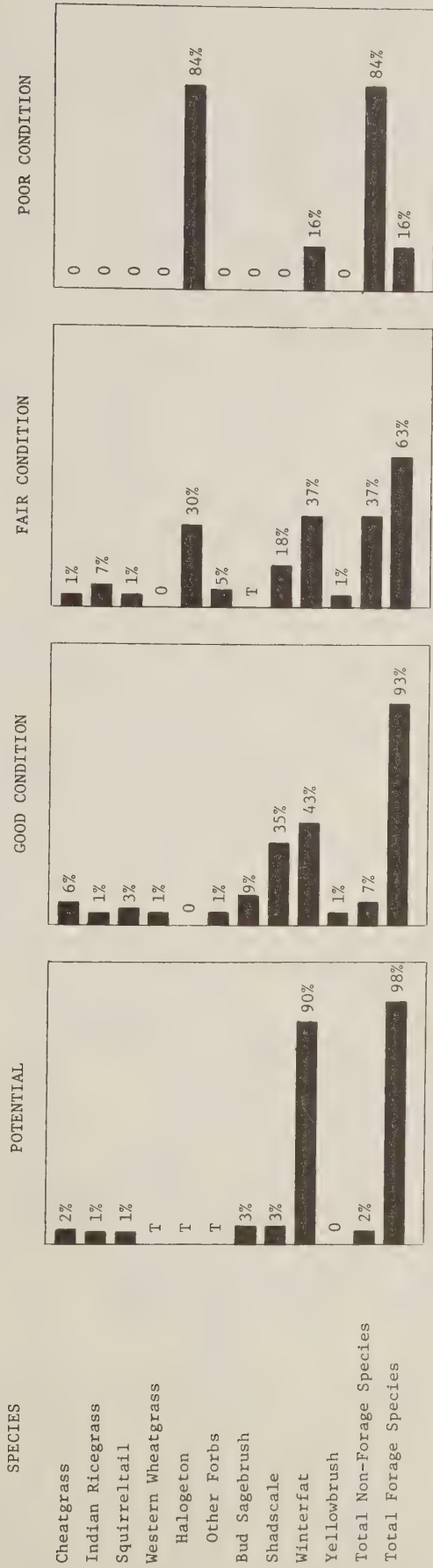
RANGE YIELD AND COMPOSITION

DESERT SILT FLATS

Range Condition	Soil Taxonomic Unit	Total Annual Yield			Number of Plots	Species Composition (Percent)													
						Grasses				Forbs				Shrubs					
		Favorable Years		Unfavorable Years		Squirreltail	Indian Ricegrass	Cheatgrass	Western Wheatgrass	Stickseed	Halogeton	Russian Thistle	Others	Globemallow	Yellowbrush	Winterfat	Bud Sagebrush	Shadscale	
Excellent	All soils	931	786	232	157	100	1	1	2	T	T	T	T	-	-	90	3	3	
	Maximum each species	-	-	-	-	-	4	7	15	3	T	2	T	2	-	100	13	19	
	Penoyer sil	656	656	503	503	20	2	4	8	2	-	-	-	1	-	54	12	16	
Good	Penoyer sil	-	-	587	587	20	3	1	6	1	-	-	-	1	1	43	9	35	
	All soils	809	809	347	347	30	1	7	1	-	30	5	-	T	1	37	T	18	
Fair	Maximum each species	-	-	-	-	-	3	18	3	-	-	45	7	-	1	3	47	1	54
	Penoyer sil	809	809	-	-	10	3	18	3	-	-	-	-	1	3	17	1	54	
		1,272	1,272	-	-	20	-	-	-	-	84	-	-	-	-	16	-	-	

YIELD AND VEGETATION COMPOSITION

Desert Silt Flats Range Site



RANGE YIELD AND COMPOSITION

DESERT ALKALI FLAT

Range Condition	Soil Taxonomic Unit	Total Annual Yield				Number of Plots	Species Composition (Percent)																	
		Favorable Years		Unfavorable Years			Grasses				Forbs				Shrubs									
		High	Average	Average	Low		Saltgrass	Indian Ricegrass	Alkali Sacaton	Squirreltail	Peppergrass	Smotherweed	Inkweed	Annals	Pickleweed	Others	Winterfat	Greasewood	Gray Molly	Nuttalls Saltbush	Seepweed	Horsebrush	Shadscale	
Excellent	All soils	1,242	1,005	620	347	60	T	T	4	-	T	16	5	T	7	3	-	36	3	12	6	T	6	
	Maximum each species	-	-	-	-	-	1	T	21	-	1	71	18	T	30	5	-	59	19	74	19	T	35	
	Abraham 1 strongly saline	768	768	711	688	40	T	-	5	-	T	26	6	-	12	2	-	39	-	-	9	-	-	
	Anco sic1 strongly saline	1,242	1,242	-	-	10	-	-	-	-	-	-	6	-	-	-	-	19	74	-	-	-	-	
	Abbott sic strongly saline	-	-	347	347	10	-	-	-	-	-	-	6	-	-	-	59	-	-	-	-	35	6	
Good	All soils	1,135	1,005	628	420	90	-	T	-	1	T	8	10	3	-	-	6	67	-	-	-	-	6	
	Maximum each species	-	-	-	-	-	-	3	-	8	1	71	56	28	-	-	37	100	-	-	-	-	52	
	Abraham 1 strongly saline	-	-	627	420	40	-	-	-	-	T	18	8	7	-	-	67	-	-	-	-	-	-	
	Bram sil	1,135	1,135	-	-	10	-	3	-	8	-	-	-	T	-	37	-	-	-	-	-	52	-	
	Poganeab sic1 strongly saline	1,129	1,129	-	-	10	-	-	-	-	-	-	56	-	-	44	-	-	-	-	-	-	-	
Fair	Abraham sic1 strongly saline	-	-	633	633	10	-	-	-	-	-	T	4	-	-	96	-	-	-	-	-	-	-	
	Abbott sic strongly saline	906	878	-	-	20	-	-	-	-	-	-	-	-	-	100	-	-	-	-	-	-		
	Abraham 1 strongly saline	768	768	-	-	10	1	-	21	-	-	9	19	T	30	-	20	-	-	-	-	-	-	

DESERT SALT FLATS

Range Condition	Soil Taxonomic Unit	Total Annual Yield			Number of Plots	Species Composition (Percent)											
						Grasses	Forbs							Shrubs			
							Saltweed	Inkweed	Pickleweed	Halogeton	Smotherweed	Chenopodium	Nuttalls Saltbush	Gray Molly	Greasewood	Horsebrush	
Excellent	All soils	1,287	1,112	370	295	100	-	1	9	23	T	T	63	2	2	T	
	Maximum each species	-	-	-	-	-	-	6	21	68	1	3	1	88	16	19	T
	Yuba soil	1,287	1,112	370	295	100	-	1	9	23	T	T	63	2	2	T	
	All soils	1,514	1,117	325	238	60	T	5	2	35	T	T	-	6	19	-	
Fair	Maximum each species	-	-	-	-	-	T	15	8	73	3	1	-	44	26	39	-
	Yuba soil	-	-	-	-	-	T	5	2	35	T	T	-	32	6	19	-

RANGE YIELD AND COMPOSITION
DESERT SHALLOW LOAM

Range Condition	Soil Taxonomic Unit	Total Annual Yield			Number of Plots	Species Composition (Percent)																					
						Grasses				Forbs						Shrubs											
		Favorable Years		Unfavorable Years		Indian Ricegrass	Bullgrass	Needleandthread	Bluebunch Wheatgr.	Western Wheatgrass	Arenaria	Annals	Penstemon	Mustard	Woolly Borage	Stickseed	Owllover	Phlox	Shadscale	Phlox	Snakeweed	Winterfat	Black Sagebrush	Buckwheat	Greasebush	Woody Aster	
		High	Average	Average		Low																					
Excellent		565	565	-	-	10	3	10	6	-	-	1	18	-	-	-	-	-	-	-	-	57	1	3	1		
Fair	All soils	374	342	211	168	36	2	1	3	3	T	T	-	T	1	2	2	1	T	8	1	6	6	62	T	-	-
	Maximum each species	-	-	-	-	-	4	5	8	6	1	1	-	1	3	5	3	5	1	13	2	12	10	84	1	-	-

RANGE YIELD AND COMPOSITION

SOUTHERN DESERT LOAM

Range Condition	Soil Taxonomic Unit	Total Annual Yield				Number of Plots	Species Composition (Percent)																						
		Favorable Years		Unfavorable Years			Grasses									Forbs					Shrubs								
							High	Average	Average	Low	Tangletop	Galleta	Red Brome	Pluffgrass	Annual Grama	Bush Muhly	Sand Dropseed	Black Grama	Indian Ricegrass	Cheatgrass	Fillerie	Annals	Euphorbia	Globemallow	Mustard	Buckwheat	Desert Marigold	Bur Sage	Creosotebush
Excellent	All soils	536	477	-	-	30	2	20	6	6	T	1	5	1	-	-	9	T	T	2	2	-	-	-	12	15	12	1	6
	Maximum each species	-	-	-	-	-	5	24	11	8	T	3	7	1	-	-	23	1	T	3	3	-	-	-	19	21	13	2	9
Good	All soils	1,197	1,172	416	416	40	2	8	4	4	T	1	6	-	5	T	4	1	-	1	-	T	1	52	10	5	-	-	
	Maximum each species	-	-	-	-	-	3	19	5	7	T	2	11	-	19	T	16	2	-	1	-	1	3	71	38	18	-	-	
	Tobler fsl	-	-	416	416	10	3	19	1	-	-	-	-	-	19	T	T	2	-	-	-	-	3	-	38	18	-	-	-

RANGE YIELD AND COMPOSITION

SOUTHERN DESERT SAND

Range Condition	Soil Taxonomic Unit	Total Annual Yield			Number of Plots	Species Composition (Percent)																																
						Grasses				Forbs				Shrubs																								
		Favorable Years		Unfavorable Years		Galleta	Sixweeks Grama	Cheatgrass	Tangletop	Spike Dropseed	Indian Ricegrass	Red Brome	Sand Dropseed	Bush Muhly	Annals	Globemallow	Filicite	Others	Desert Marigold	Bladderpod	Desert Rabbitbrush	Russian Thistle	Skeleton Loco	Mormontea	Snakeweed	Sand Sagebrush	Range Ratany	Encelia Formosa	Fourwing Saltbush	Creosotebush	Bur Sage	Yellowbrush						
		High	Average	Average																													Low					
Good	All soils	605	557	300	181	72	32	2	2	13	54	13	9	29	12	29	8	24	4	-	2	5	2	T	T	1	1	1	T	7	4	3	3	1	2	T	2	T
	Maximum each species	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	39	6	1	2	4	8	6	1	41	27	22	21	9	15	3	17	1	1	T			
	Pintura lfs	-	-	272	181	20	38	-	2	12	-	14	-	-	-	T	-	-	-	-	-	-	-	4	-	11	-	-	-	8	2	8	T	T				
Fair	Ivins lfs	572	572	358	358	20	46	-	-	14	-	-	-	4	13	-	-	-	-	-	-	-	3	-	T	14	T	-	-	-	-	-	-	-	T	T		
		627	627	-	-	10	25	-	-	9	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	17	-	-	-	-	-	-	46			

RANGE YIELD AND COMPOSITION
SOUTHERN DESERT SHALLOW HARDPAN

Range Condition	Soil Taxonomic Unit	Total Annual Yield				Number of Plots	Species Composition (Percent)																							
											Grasses				Forbs				Shrubs											
		Favorable Years		Unfavorable Years							High	Average	Average	Low	Red Brome	Cheatgrass	Threawn	Others	Sixweeks Rescue	Schismus	Mustard	Annals	Skeletonweed	Flillerie	Daisy	Buckwheat	Loco	Foothill Larkspur	Others	Creosotebush
Good	All soils	1,111	911	-	-	30	17	T	T	T	3	T	1	3	T	6	T	1	T	T	T	27	32	T	2	9				
	Maximum each species	-	-	-	-	-	23	T	T	T	9	T	1	8	1	T	12	T	1	T	T	37	50	T	5	13				

PLANT LIST

Common and Scientific Names

Grasses and Grass-Like Plants

<u>Common Name</u>	<u>Scientific Name</u>
Alkali sacaton	Sporobolus airoides
Baltic rush	Juncus balticus
Bearded wheatgrass	Agropyron subsecundum
Black grama	Bouteloua eriopoda
Bluebunch wheatgrass	Agropyron inerme and Agropyron spicatum
Blue grama	Bouteloua gracilis
Blue wildrye	Elymus glaucus
Broadleaf sedge	Carex spp
Bullgrass	Elymus simplex
Bush muhly	Muhlenbergia porteri
Cheatgrass	Bromus tectorum
Columbia needlegrass	Stipa columbiana
Crested wheatgrass	Agropyron cristatum
Desert needlegrass	Stipa speciosa
Dropseed	Sporobolus spp
Dryland sedge	Carex spp
False buffalograss	Triodia pulchella
Fluffgrass	Triodia pulchella
Foxtail	Hordeum jubatum
Galleta	Hilaria jamesi
Great Basin wildrye	Elymus cinereus
Horsetail	Equisetum spp
Idaho fescue	Festuca idahoensis
Indian ricegrass	Oryzopsis hymenoides
Kentucky bluegrass	Poa pratensis
King's fescue	Hesperochloa kingi
Letterman needlegrass	Stipa lettermani
Meadow foxtail	Alopecurus pratensis
Mesa dropseed	Sporobolus flexuosus
Mountain brome	Bromus carinatus
Mountain muhly	Muhlenbergia montana
Muttongrass	Poa fendleriana
Narrowleaf sedge	Carex spp
Needleandthread	Stipa comata
Nevada bluegrass	Poa nevadensis
Nodding bluegrass	Poa reflexa
Nodding brome	Bromus anomalus
Oniongrass	Melica bulbosa
Orchardgrass	Catylis glomerata
Prairie junegrass	Koeleria cristata
Red brome	Bromus rubens
Redtop	Agrostis alba

Common NameScientific Name

Ring muhly
Saltgrass
Sandberg bluegrass
Sand dropseed
Schismus
Sheep fescue
Sixweeks fescue
Sixweeks grama
Slender wheatgrass
Smooth brome
Spike dropseed
Spike fescue
Squirreltail
Streambank wheatgrass
Tall native bluegrass

Tangletop
Thickspike wheatgrass
Threeawn
Thurber's fescue
Thurber's needlegrass
Ticklegrass
Timothy
Trisetum
Tufted hairgrass
Western wheatgrass

Muhlenbergia torreyi
Distichlis stricta
Poa secunda
Sporobolus cryptandrus
Schismus barbatus
Festuca ovina
Festuca octoflora
Bouteloua barbata
Agropyron pauciflorum
Bromus inermis
Sporobolus contractus
Hesperochloa kingi
Sitanion hystrix
Agropyron riparium
Poa spp, P. longiligula,
P. fendleriana, P. nevadensis, P. ampla
Heteropogon contortus
Agropyron dasystachyum
Aristida spp
Festuca thurberi
Stipa thurberiana
Schedonnardus paniculatus
Phleum pratense
Trisetum spp
Deschampsia caespitosa
Agropyron smithi

Forbs

Actinea
Alfalfa
American vetch
Annual saltweed
Aplopappus
Arenaria
Arrowgrass
Aster
Astragalus
Balsamroot

Bastard toadflax
Bedstraw
Beeflower

Bitterweed
Bladderpod
Bluebell
Borage
Buckwheat

Actinea odorata
Medicago sativa
Vicia americana
Atriplex spp
Aplopappus spp
Arenaria spp
Triglochin maritima
Aster spp
Astragalus spp
Balsamorhiza sagittata and
B. macrophylla
Comandra umbellata
Galium boreale
Cleome serrulata and
C. lutea
Actinea odorata
Lesquerella argentea
Mertensia spp
Several genera
Eriogonum spp

Common NameScientific Name

Bull thistle	Cirsium lanceolatum
Bur buttercup	Ranunculus testiculatus
Buttercup	Ranunculus spp
Butterweed	Senecio serra
Canada thistle	Cirsium arvense
Chenopodium	Chenopodium album
Cinquefoil	Potentilla spp
Columbine	Aquilegia coerulea
Cow cabbage	Heracleum lanatum
Croton	Croton spp
Cryptantha	Cryptantha spp
Curlycup gumweed	Grindelia squarrosa
Cymopterus	Cymopterus fendleri
Daisy	Erigeron spp
Dandelion	Taraxacum officinale
Deathcamas	Zigadenus elegans
Desert marigold	Tagetes erecta
Desert plantain	Plantago fastigiata
Drummond thistle	Cirsium drummondi
Euphorbia	Euphorbia spp
Evening primrose	Oenothera spp
False yarrow	Chaenactis douglasi
Filerie	Erodium cicutarium
Flax	Linum lewisi
Foothill larkspur	Delphinium spp
Gaillardia	Gaillardia aristata
Geranium	Geranium spp
Gilia	Gilia spp
Globemallow	Sphaeralcea coccinea
Goldenrod	Solidago occidentalis
Gumweed	Grindelia squarrosa
Hairy goldaster	Chrysopsis villosa
Halogeton	Halogeton glomerata
Hawksbeard	Crepis acuminata
Herbaceous sage	Artemisia gnaphalodes and A. dracunculoides
Horsemint	Agastache urticifolia
Houndstongue	Hackelia floribunda
Hymenoxys	Actinea odorata
Indian paintbrush	Castilleja spp
Indianwheat	Plantago fastigiata
Inkweed	Suaeda intermedia
Jacob's ladder	Polemonium foliosissimum
Knotweed	Polygonum douglasi
Leptodactylon	Leptodactylon pungens
Lily-of-the-valley	Smilacina stellata
Little fireweed	Epilobium paniculatum
Little sunflower	Viguiera multiflora
Loco	Astragalus spp
Lomatium	Lomatium spp

<u>Common Name</u>	<u>Scientific Name</u>
Lotus	Lotus spp
Lupine	Lupinus spp
Marsh marigold	Caltha leptosepala
Mat aster	Aster acris nanus
Mat astragalus	Astragalus spp
Mat buckwheat	Eriogonum caespitosum
Mat loco	Astragalus spp
Meadowrue	Thalictrum fendleri
Mint	Mentha spicata and M. arvensis
Mountain dandelion	Agoseris glauca and A. taraxifolia
Mulesear dock	Wyethia amplexicaulis
Mustard	Several genera
Narrowleaf lotus	Lotus wrighti
Native clover	Trifolium spp
Onion	Allium acuminatum and A. spp
Owlclover	Orthocarpus tolmiei
Oxytropis	Oxytropis spp
Oyster plant	Tragopogon dubius and T. porrifolius
Peavine	Lathyrus spp
Penstemon	Penstemon spp
Peppergrass	Lepidium spp
Phlox	Phlox longifolia and P. stansburyi
Pickleweed	Allenrolfea occidentalis
Poison vetch	Astragalus diversifolius
Poverty weed	Iva axillaris
Pussytoes	Antennaria dimorpha
Ragweed	Ambrosia artemisiaefolia
Rockcress	Arabis spp
Russian thistle	Salsola kali tenuifolia
Saltweed	Atriplex spp
Sandbur	Cenchrus longispinus
Sandlily	Oenothera caespitosa and O. spp
Sandwort	Arenaria spp
Scarlet gilia	Gilia aggregata
Scurfpea	Psoralea spp
Sedum	Sedum spp
Seepweed	Suaeda intermedia
Sego lily	Calochortus nuttalli
Senecio	Senecio spp
Shooting star	Dodecatheon pauciflorum
Sieversia (Old Man's Whiskers)	Geum triflorum ciliatum
Skeleton loco	Astragalus convallarius diversifolius
Smotherweed	Bassia hyssopifolia
Sneezeweed	Helenium hoopesi

Common NameScientific Name

Stellaria	Stellaria jamesianna
Stickleaf	Mentzelia albicaulis and M. spp
Stickseed	Lappula redowski
Stoneseed	Lithospermum ruderale
Sunflower	Helianthus annuus
Sweetanise	Osmorhiza occidentalis
Sweet vetch	Astragalus spp
Tall larkspur	Delphinium occidentale
Tarweed	Madia glomerata
Thistle	Cirsium spp
Timber milkvetch	Astragalus convallarius
Toadflax	Comandra umbellata
Townsendii	Townsendia montana and T. florifer
Trailing daisy	Erigeron flagellaris
Valerian	Valeriana edulis and V. spp
Verbena	Verbena bracteata
Vetch	Vicia spp
Violet	Viola spp
Waterleaf	Hydrophyllum capitatum and H. occidentale
Western coneflower	Rudbeckia occidentalis
White Dutch clover	Trifolium repens
Whorled milkweed	Asclepias verticillata
Wild carrot	Lomatium dissectum
Wormwood	Artemisia dracunculoides and A. spp
Yarrow	Achillea lanulosa

Shrubs and Trees

Alder	Alnus tenuifolia
Aspen	Populus tremuloides
Big sagebrush	Artemisia tridentata
Birchleaf mahogany	Cercocarpus betuloides
Bitterbrush	Purshia tridentata
Blackbrush	Coleogyne ramosissima
Black sagebrush	Artemisia nova
Buckwheat	Eriogonum spp
Bud sagebrush	Artemisia spinescens
Bur sage	Franseria dumosa
Ceanothus	Ceanothus velutinus and C. spp
Chokecherry	Prunus virginiana
Cholla	Opuntia spp
Cliffrose	Cowania stansburiana
Concolor fir	Abies concolor
Creosotebush	Larrea tridentata
Desert almond	Prunus fasciculata

Common NameScientific Name

Desert rabbitbrush	Chrysothamnus viscidiflorus
Dogwood	Cornus stolonifera
Elderberry	Sambucus cerulea
Encelia farinosa (Brittlebush)	Encelia farinosa
Fourwing saltbush	Atriplex canescens
Fremont mahonia	Mahonia fremonti
Fringed sagebrush	Artemisia frigida
Gambel oak	Quercus gambeli
Gooseberry	Ribes grossularia and R. spp
Gray molly	Kochia vestita
Greasebush	Forsellesia spp
Greasewood	Sarcobatus vermiculatus
Horsebrush	Tetradymia canescens and T. spp
Indigo bush	Amorpha fruticosa
Joshua tree	Yucca brevifolia
Juniper	Juniperus osteosperma and J. spp
Low sagebrush	Artemisia arbuscula
Lycium (Wolfberry)	Lycium andersoni and L. spp
Manzanita	Arctostaphylos patula
Maple	Acer grandidentatum and A. glabrum
Mormontea	Ephedra nevadensis and E. spp
Mountain laurel	Pachistima myrsinites
Mountain myrtle	Pachistima myrsinites
Ninebark	Physocarpus malvaceus
Nuttall's saltbush	Atriplex gardneri
Oakbrush	Quercus gambeli and Q. spp
Oregon grape	Mahonia repens
Phlox	Phlox hoodi
Pinon pine	Pinus cembroides edulis and P. c. monophylla
Ponderosa pine	Pinus ponderosa
Pricklypear	Opuntia polyacantha and O. spp
Range ratany	Krameria parvifolia
Red elderberry	Sambucus microbotrys
Rock goldenrod	Solidago petradoria
Rocky Mt. red juniper	Juniperus scopulorum
Rose	Rosa woodsii and R. spp
Rubber rabbitbrush	Chrysothamnus nauseosus
Sand sagebrush	Artemisia filifolia
Serviceberry	Amelanchier alnifolia and A. utahensis
Shadscale	Atriplex confertifolia
Silver sagebrush	Artemisia cana
Snakeweed	Gutierrezia sarothrae
Snowberry	Symphoricarpos oreophilus and S. spp
Spiny hopsage	Grayia spinosa
Spiny horsebrush	Tetradymia spinosa
Squawapple	Peraphyllum ramosissimum

Common Name

Scientific Name

Squawbush
Threetip sagebrush
Willow
Winterfat
Woody aster
Woody phlox
Yellowbrush

Yucca

Rhus trilobata
Artemisia tripartita
Salix exigua and s. spp
Eurotia lanata
Aster xylorrhiza
Phlox hoodi
Chrysothamnus lanceolatus
and C. spp
Yucca glauca and Y. spp.

